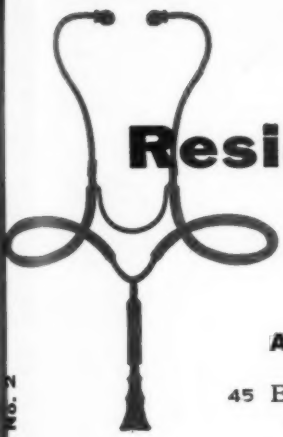
JOURNAL FOR THE HOSPITAL STAFF OFFICER

FEBRUARY 1961

Resident Physician

February 1961, Vol. 7, No. 2



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Resident Physician

Articles

The Resident Physician is published monthly on the fifteenth by The Resident, Inc., with publication offices at 34 North Crystal Street, East Stroudsburg, Pennsylvania. Executive, advertising and editorial offices at 1447 Northern Boulevard, Manhasset, New York. If undelivered, please send form 3547 to Resident Physician, 1447 Northern Boulevard, Manhasset, New York.

in G.I., G.U. and Biliary SPASM

"Murel"-S.A.

Sustained Action Tablets

prompt, continuous and prolonged antispasmodic action for 6 to 9 hours with a single tablet

"MUREL" Advantages[1-4]

- Exceptionally effective clinically because three-way mechanism of action in one molecule (anticholinergic, musculotropic, ganglion-blocking) exerts synergistic spasmolytic effect
- Complementary action permits significantly low dosage and reduces reaction potential of any one mechanism
- Remarkably free from drug-induced complications such as mouth dryness, visual disturbances, urinary retention

Suggested Average Dosage: 40 to 80 mg. daily, depending on condition and severity. The higher range of dosage is usually required in spasm of the genitourinary and biliary tracts. One "Murel"-S.A. Sustained Action Tablet morning and evening. *When anxiety and tension are present,* "Murel" with Phenobarb-S.A. is suggested.

Available as: No. 315—"Murel"-S.A., 40 mg. Valethamate bromide; and No. 319—"Murel" with Phenobarb-S.A., with ½ gr. phenobarbital, present as the sodium salt. Both in bottles of 100 and 1,000.

Also available: "Murel" Tablets No. 314—10 mg. Valethamate bromide; "Murel" with Phenobarbital Tablets No. 318—10 mg. Valethamate bromide and ¼ gr. phenobarbital.

"Murel" Injectable No. 405—10 mg. Valethamate bromide per cc.

Precautions: As with other antispasmodic agents, caution should be exercised in patients with prostatic hypertrophy, glaucoma, and in the presence of cardiac arrhythmias.

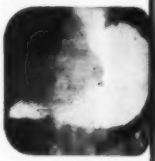
References available on request.

AYERST LABORATORIES
New York 16, N. Y. • Montreal, Canada

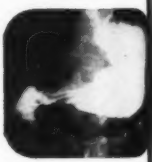
for acute, severe episodes
"MUREL" Injectable

Female patient, age 55 complaining of nausea and epigastric discomfort after meals.

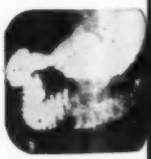
Diagnosis: Hiatus hernia and gastric ulcer.



1 hour after barium administration: Retention of barium due to spasticity of the gastric outlet, and incomplete visualization of the pylorus, duodenum and duodenal sweep. (Some barium has entered the small bowel.)



20 minutes after administration of "Murel" 2 cc. I.V.: Barium entering duodenum and duodenal sweep as spasticity is relieved.



10 minutes later: Good filling of the gastric outlet as well as of the duodenal sweep.

Medical Records of Ayerst Laboratories 603

February

Resident Physician

Departments

AFTER SURGERY—one of a series of "medico-genic" paintings by Dr. Charles R. Golthamer, it won Second Prize for oils at a 1959 exhibition sponsored by the Los Angeles Physicians Art Society. (Another oil by Dr. Golthamer took First Prize.) His skill as an artist has been recognized by a number of other awards and he has had a one-man show. A radiologist in Van Nuys, California, Dr. Golthamer has done more than 30 paintings which he characterizes as "medico-genic"—"paintings with a medical background or message." Another in this series, "Intern's Lunch," appeared on the cover of the September 1960 issue of your journal.

Articles
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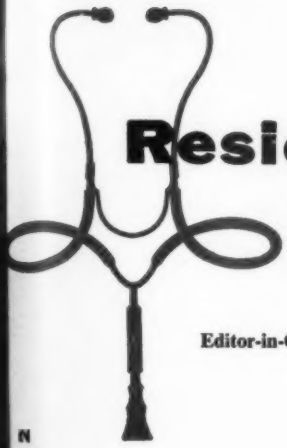
Journal for the Hospital Staff Officer



Resident Physician

February 1961, Vol. 7, No. 2

Articles are accepted for publication with the understanding that they are contributed solely to this publication, and will directly interest or be of practical value to resident physicians and interns. When possible, two copies of the manuscript should be submitted.

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Resident Physician

Resident Physician

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Adabee: for people on diets...

Added to dieting regimens, Adabee's authoritative quantities of A, B, C, and D vitamins help keep tissue levels up when food intake must be severely curtailed. And it serves up its basic nutrition without folic acid, B_{12}, or other extraneous ingredients of recently challenged rationality.[1-4] If you have a patient on a diet, support him with Adabee. Each yellow, capsule-shaped tablet contains: Vitamin A, 25,000 USP units; Vitamin D, 1,000 USP units; Thiamine mononitrate (B_1), 15 mg.; Riboflavin (B_2), 10 mg.; Pyridoxine HCl (B_6), 5 mg.; Nicotinamide, 50 mg.; Calcium pantothenate, 10 mg.; and Ascorbic acid (vitamin C), 250 mg. Or if you prefer, there's Adabee-M with its eight minerals.

references: 1. J.A.M.A., 169:41, 1959. 2. J.A.M.A., 173:240, 1960. 3. J.A.M.A., 173:1831, 1960. 4. J.A.M.A., 174:1332, 1960.

A.H. Robins Company inc. Richmond, Va.

Therapeutic Reference

The following index contains all the products advertised in this issue. Each product has been listed under the heading describing its major function. By referring to the pages listed, the reader can obtain more complete information. All products are registered trademarks, except those with an asterisk (*).

a pair of cardiac patients:

both are free of pain—but only one is on

DILAUDID®

(Dihydromorphinone HCl)

swift, sure analgesia normally unmarred by nausea and vomiting

DILAUDID provides unexcelled analgesia in acute cardiovascular conditions. Onset of relief from pain is almost immediate. The high therapeutic ratio of DILAUDID is commonly reflected by lack of nausea and vomiting—and marked freedom from other side-effects such as dizziness and somnolence.

by mouth **by needle** **by rectum**

2 mg., 3 mg., and 4 mg.

May be habit forming—usual precautions should be observed as with other opiate analgesics.

KNOLL PHARMACEUTICAL COMPANY • ORANGE, NEW JERSEY

Viewbox Diagnosis

Edited by Maxwell H. Poppel, M.D., F.A.C.R.,
Professor of Radiology, New York University College of Medicine
and Director of Radiology, Bellevue Hospital Center

Forty-two-year-old female. Chief complaint: difficulty in walking and pain in and about both hip joints.

What is your diagnosis?

1. Rheumatoid arthritis
2. Osteoarthritis
3. Congenital dislocation
4. Otto's Disease (Protrusio Acetabuli)

(Answer on page 139)

...does she know that only **you** can help?

Many patients are unaware that their physician is the best source of contraceptive advice. Your prescription for Ortho-Gynol or Ortho-Creme with a diaphragm assures her the best available contraceptive protection. Accurate tests* for spermicidal potency, as well as years of clinical use, demonstrate that ORTHO contraceptive products are instantaneously spermicidal. The choice between Ortho-Gynol and Ortho-Creme is one of individual esthetic preference.

Ortho-Gynol® vaginal jelly

Ortho®-Creme vaginal cream

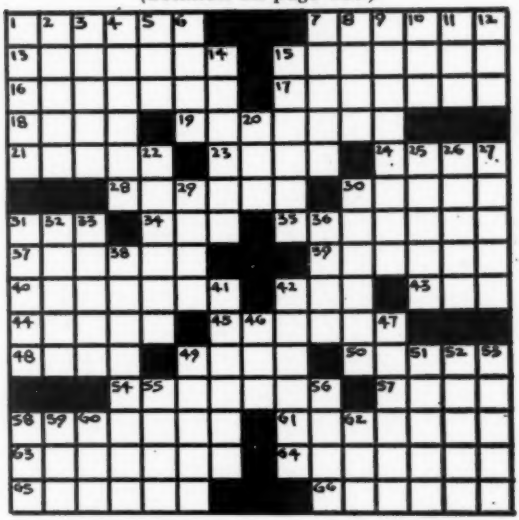
*The spermicidal potency of all ORTHO products is controlled by the **Titration Test** and the **Sander-Cramer Test**, which more closely duplicate vaginal conditions during coitus than other tests.

WHENEVER A DIAPHRAGM IS INDICATED

Ortho

Resident Relaxer

(Solution on page 139)



ACROSS

1. Inflammatory skin disease with small vesicles
7. Deadly
13. The dynamic chromatin in the nucleus
15. Negative electrode
16. Former term for chloride
17. Physician to Henry VIII
18. Aluminum and potassium sulfate
19. Within the intestine
21. Inhabitants of Denmark
23. Beverage (pl.)
24. Falls behind
28. Kind of sword
30. Name for group of iodine or bromine albuminates
31. 201
34. Century (abbr.)
35. Condition following as consequence of another disease
37. Semilunar bone
39. 19th century American statesman
40. Bulboid corpuscle
42. Iodine, calcium (symbols)
43. Thulium, einsteinium (symbols)
44. Replenish with weapons
45. Meld again
48. Tropical wind
49. Group of players
50. Selenium, sulfur, terbium (symbols)
54. Layer, as in the epidermis
57. Journey
58. Evident
61. Any rose-colored rash
63. A crown
64. Resilient
65. One who works with leather
66. Unusual type of mental or physical constitution

DOWN

1. Toward the ventral aspect of the body
2. Inner aspect of the gum
3. Run again
4. Elementary book
5. Electron, gallium (symbols)
6. Location
7. Dens
8. Vessel for heating liquids
9. An element, atomic number 81, symbol TI
10. Ad—
11. Adrian (abbr.)
12. A sheltered place
14. Substance of teeth
15. Purifies
20. Golf term
22. That part of the vertebral columns which forms a part of the pelvis
25. Substance able to act upon an organism
26. In Jewish legend, an artificial man
27. Wire loop for removing polypi
29. Pare
30. Has the same quantity
31. Office worker
32. In anatomy, a combining form for wedge
33. An oily hydrocarbon
36. Suffix forming inceptive verbs
38. Spot rubbed bare of skin
41. The mammary gland
42. Incarcerate
46. Devour
47. Abhor
49. More steadfast
51. Blackened
52. A flower
53. Firmness of the tissues
55. Orthopedic device
56. Brownish spot on the skin
58. Month of the year (abbr.)
59. Large snake
60. Vanadium, radon (symbols)
62. The capsule of a tumor

effective
therapy
in the
critical
pH
zone

Massengill® Powder

The buffered acid vaginal douche with low surface tensi

The normal pH of the vagina (3-4.5) inhibits the growth of most pathogens, but menstruation and vaginal infections may cause the vaginal pH to rise . . . thus promoting greater growth of pathogens.

A simple acid douche will restore normal vaginal pH, but it is quickly neutralized by alkaline mucosa and pH rises again. Effective agents must be *buffered* to maintain the pH for several hours and be able to *penetrate* the folds of the vaginal mucosa for effective cleansing.

FORMULA: Ammonium Alum, Boric Acid, Phenol, Eucalyptol, Berberine, Menthol, Thymol and Methyl Salicylate.

Letters to the Editor

Unsigned letters will neither be published nor read. However, at your request, your name will be withheld.

RP Overseas

As a South African M.D. on the staff of this hospital since July 1959, I want to express my thanks and appreciation for having received RESIDENT PHYSICIAN regularly. I found it most interesting and also informative. I will be returning to South Africa this month and would appreciate receiving further copies of your magazine in the future. I will be serving as a resident in hospitals in South Africa for at least another three years.

I would also like to have it for my colleagues there, particularly for advertising purposes, and I am sure that some of them will subscribe.

Thank you in anticipation.

JOHN J. FRICK, M.D.
LOUISE OBICI MEMORIAL HOSPITAL
SUFFOLK, VIRGINIA

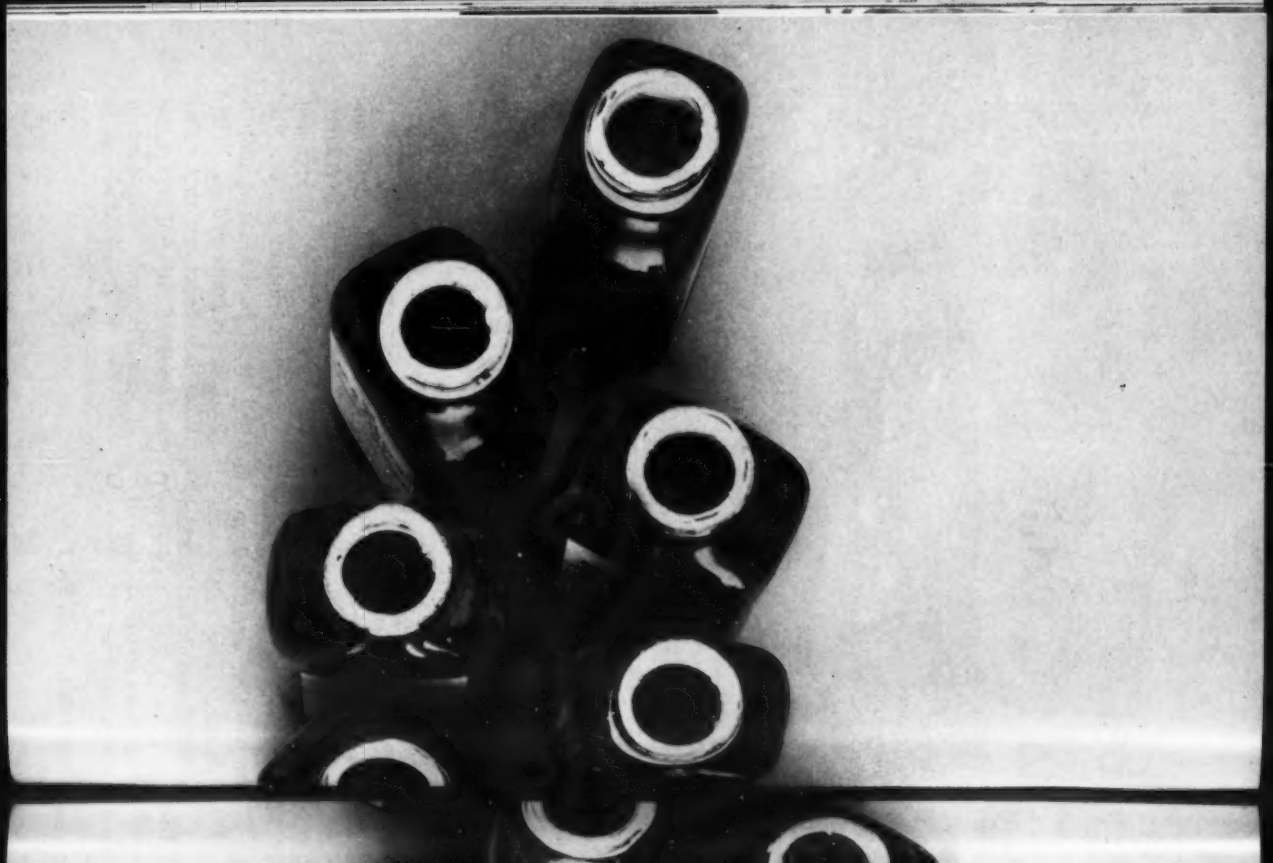
• *Sorry. Except for subscribers, our circulation policy does not permit sending copies to physicians overseas.*

Conclusions Questioned

I always enjoy and usually respect the points of view and conclusions in the articles I read in the RESIDENT PHYSICIAN. The article, "Meetings at Atlantic City," by Perrin H. Long, M.D., in the August, 1960 issue is a marked exception.

Dr. Long presents data concerning the meetings at Atlantic City in May, 1960, of three major societies including . . . "the pick of the land as far as internal medicine is concerned . . ." Dr. Long first concludes that "This is a good indication of the volume of scientific work being done in

—Continued on page 36



"wearability"

NO TASTE FATIGUE
EXCELLENT RESULTS
NO CONSTIPATION

the most widely prescribed and most wearable of all antacids

suspension tablets

—*Continued from page 33*

what can broadly be called the field of internal medicine in this country and Canada."

Dr. Long presents a table compiling the geographical areas from which the papers originated. Concerning this table he concludes secondly: "It points up those places in this country in which, from the point of view of clinical investigation, the scientific atmosphere is brisk and invigorating," and, "These data clearly indicate the predominant position of the East Coast area as far as clinical investigation is concerned." He says further: "However this area does contain about one-third of the medical schools in this country. This may be a factor." He then delineated more precisely the areas from which papers were submitted.

I have attempted to review briefly and without undue violence to Dr. Long's words, his major conclusions. At this point I should like to point out what I consider to be errors in reasoning to these conclusions.

A basic principle of reasoning from data is that the data must be explicit and that conclusions can only be as precise as the data from which they are drawn. It is my belief that the data herein contained do not lead logically to the conclusions given following the presentation of these data.

Dr. Long's first conclusion generalizes from the meetings at Atlantic City to the entire field of internal medicine in this country and Canada, disregarding, among other things, the proportion of society members attending from different parts of the country. His conclusion would be valid *only* if the geographical area figures remained the same for meetings held in, say, Los Angeles, or Quebec.

Five hundred and ten papers were submitted; one hundred and twenty-eight were read. Why were three hundred and eighty-two not read? Were they rejected? Why? By whom? Were these three hundred and eighty-two included in his reasoning that this is a good indication of the volume of scientific work being done? Perhaps these papers were rejected as being not good; good, but not scientific; good and scientific, but not meeting other criteria.

The second conclusion may be similarly questioned. Might much clinical investigation go on and not be submitted to these meetings? Where does it occur? Why is it submitted elsewhere? Data is given for the papers submitted.

—*Concluded on page 40*

—Concluded from page 36

but not for the papers read before the societies. Are these proportions the same? As an apologia for non-east coast people, it is said that about one-third of the medical schools are in the eastern area. What percentage of internal medicine residents and practicing internists are in this area? Might these factors be of significance.

My conclusion about Dr. Long's conclusions is that he may be right, but if so it is at the expense of adequately stated considerations, based on variables he does not overtly describe for the reader.

John A. Beuhler, M.D., Ph.D.
SAN RAFAEL, CALIFORNIA

• *The Editor appreciates Dr. Beuhler's comments. Actually, the only other major meetings devoted primarily to clinical investigation in internal medicine are those of the Central Society for Clinical Investigation. It is asked "Why were three hundred and eighty-two papers not read." Answer: "Not enough time; they were read by title." Who selected which papers would be read? For the Association of American Physicians, and the American Society for Clinical Investigation, by tradition the Presidents of the respective societies, for the Federation for Clinical Research, a committee. As far as I know, none were rejected because of their quality, but because you can't run medical meetings twenty-four hours a day. Relative to your second question, the answer is of course yes, many papers are submitted directly for publication, but, from more than thirty years relative to where to present papers, I would judge that the "fancy" in internal medicine would rather be on the programs at Atlantic City than at almost any other meeting. Why? Because the cognoscenti are there. Finally, I cannot tell how many residents in internal medicine are in the "eastern area," but I can say that in the last edition of the Directory of Medical Specialists, roughly one hundred out of the two hundred and sixty-four pages devoted to listing Diplomates of the American Board of Internal Medicine were devoted to Diplomates in the so-called "eastern area."*

Perrin H. Long, M.D.

Editor's Page

Excerpts from a recent letter sent to a pharmacologist by Dr. Perrin H. Long, Editor-in-Chief, RESIDENT PHYSICIAN

A Letter to My Friend, the Pharmacologist

Dear Bob:

. . . The giant step which a number of pharmaceutical manufacturers have made in their over-all activities began with the introduction into this country of the sulfonamides in 1936. As these drugs were completely new and cured people of what might otherwise have been fatal illnesses, it was not strange at all that they quickly became known as the "Miracle Drugs." Interestingly enough though, but two of the sulfonamides originally had protected names in this country—Prontosil® for the original I. G. Farben product, and Prontylin® for one brand of sulfanilamide. All other sulfonamides until the advent of Gantrisin® after World War II had generic names.

. . . Around 1939 I was made a member of the (then) Council on Pharmacy and Chemistry of the AMA, and as its referee on all antimicrobial drugs from 1939 to 1960, I passed on all claims as to efficacy, all data on toxicity, and until around 1955, all advertising (journal,

PUBLISHER'S NOTE

In his letter, printed on these pages, Dr. Long draws on an extensive background of close association and responsibility in the antimicrobial fields. He was primarily responsible for the introduction of the sulfonamides into the U.S. in 1936. Together with Drs. E. K. Marshall, Jr. and Elizabeth A. Bliss, he reported the first work on sulfanilamide and sulfapyridine in this country. This group had much to do with the development, basic and clinical, of sulfaguanidine, sulfathiazole and sulfadiazine. Dr. Long stated in his letter that it was Dr. Marshall, "who by his work on sulfaguanidine, made the old pharmacological concept of an 'intestinal antiseptic' a reality."

As chairman of the Chemotherapeutic and Other Agents Committee of the National Research Council from its inception before the U.S. entered World War II until he entered Army medical service, Dr. Long was responsible for initiating the

direct mail, and otherwise), package inserts, brochures, etc., dealing with these agents under the rules of the "Seal of Acceptance" of the Council. . . In those times the "Seal" covered not only advertising in AMA journals, but also all the journals participating in the Cooperative Advertising Bureau—which covered most of the journals of the state Societies.

In other words, the Council in essence exercised monopolistic control over the promotional and informational activities and the advertising of all *major drugs* in this country. It decided what the manufacturers could say about their products. The big stick in maintaining the Council's authority was that it controlled the major advertising outlets, and through this the tone of the advertisements of all Council-accepted drugs. Thus it exercised a control through its referees and consultants which under the law could not then or now be exercised by the FDA.

When I joined the Council in 1939, under the rules of the "Seal of Acceptance," *only the inventor of a product* could advertise it under a brand name in any of the AMA controlled publications or those of the Cooperative Advertising Bureau. This really gave the inventor of the drug a real jump on the market, with his brand name. The major rule relative to a brand name was

steps which eventually resulted in penicillin being produced in the United States on a commercial scale by late 1943 or early 1944. After the war, he served on the NRC Committee which carried out the clinical trials of streptomycin. Dr. Long also published the first clinical investigations on Aureomycin and has studied every antibiotic introduced since that time. It should be understood by the reader that Dr. Long's letter expresses his personal views.

THE PUBLISHER

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that it should not be therapeutically suggestive. All he had to do then was to advertise it for six months to establish its name in doctors' minds, then issue licenses for its manufacture to other drug companies, none of which could use a brand name in their advertising. Essentially, the Council's action in "accepting" a new product with its brand name gave the inventor of it a monopoly of the market for that product.

You might wonder about what happened to the AMA's policies which I have just described. Shortly after the war, the Council on Pharmacy and Chemistry, noting trends in anti-trust decisions, conducted an inquiry into the matter of brand names and came to the conclusion that its policy of permitting but a single brand name for a product might result in anti-trust proceedings being brought against the AMA, as the Council's policy on brand names could be construed as being in restraint of trade because it eventually created a monopoly. The inquiry resulted in the Council taking the step to abandon the policy of having a trade name restricted to the inventor's product. This permitted the use of multiple brand names. Similarly, in the middle fifties, as a result of further Court decisions, the considered advice of counsel, and a study by the Council, the "Seal of Acceptance" (under which advertising, promotion, literature, etc., about a product were controlled) was abandoned for the same reason, fear of anti-trust proceedings. These two moves greatly lessened the power of the Council to maintain a hold over the advertising copy, etc., on drugs. It must be said here, that with very minor exceptions, rarely did I have to suggest that manufacturers of anti-microbial agents change promotional or other material which dealt with Council-accepted drugs. The promotional material was accurate in its content.

After having been interested in the aspect of our professional relations for years there is one thing about this whole subject which has been difficult for me to understand, and that is why so many full-time medical school, and a number of practicing physicians have become so disturbed recently about patents, brand names, the cost of drugs, profits on drugs, the marketing and promotion of drugs. Now about patents, I may be old-fashioned, but I still believe completely in free enterprise which means to me that an inventor has a right to protect his invention, call it what he wants, protect that name, and make a profit on it under normal economic laws which govern competition and supply and demand. Some have said that this is the philosophy of *caveat emptor*. I say, "Nonsense!" What actually has developed instead under this philosophy is *caveat vendor!* Any other philosophy in my book is socialistic, which will eventually lead to the destruction of initiative in our country and the production of the type of over-all ultra-mediocrity so vividly described by George Orwell in "1984."

I myself have always favored brand names because the brand name informs me about the maker of the product. A physician must be permitted to discriminate between products which he uses. With a thousand and one things claiming his attention he should not have to run down to see or call up the pharmacist every time he prescribes, in order to know which company's product is being used to fill his prescription. Were only generic names used, I feel certain that one would see a rise in counterfeiting drugs by unscrupulous individuals, and the substitution of counterfeit drugs by dishonest vendors in the prescription business. Almost all counterfeiters deliver generic named drugs. Often his patient will not know where he will have the prescription filled. How then could the doctor check up? The great virtue of most of the brand names in medicine is that the pharmacist must fill the prescription with the product you choose and they can be taken on trust. Naturally, the brand name product must be effective; i.e., give proper service, or the customer (the doctor) will soon try another brand among the many that are competing for his attention. Brand names reflect the honor

and integrity of the manufacturer of the product. This I will tell you is the most valued possession of the manufacturer. They are his private property as much as is his house. Without patents or brand names, I am certain the doctor will be receiving inferior products at times. *The brand name is today a major protection to both the patient and doctor.*

Furthermore, I have no patience with medical school people who derogate the educational efforts of pharmaceutical manufacturers. In my book such criticism is an exhibition of "sour grapes" (modern pronunciation "guilt-reaction") stemming from a realization of the overall failure of efforts in undergraduate and postgraduate education in the field of therapeutics. I do believe that those who guide the destinies of the curriculum in many of our medical schools have forgotten at times that our major task is to produce doctors who are to take care of sick people and who will prescribe drugs to alleviate or cure their illness. Certainly, the teaching of therapeutics as differentiated from pharmacology hardly exists any more. But let a drug company try to fill this need, and those who know little about treatment of sick people cry out in horror. If you don't believe what I say, get the transcript of the total hearings of the Kefauver Committee and read what some of our colleagues have testified to. Were it not so pathetic, it would have been ludicrous. One witness stated in essence that the *American Journal of Hygiene* was essentially an unknown journal, and scoffed at a paper in it on the epidemiology of the common cold which, in his ignorance, he did not realize was the greatest study ever made on this common malady. This was Wade Hampton Frost's great paper published in 1933. Other equally uninformed testimony cluttered the record of this Committee.

Now I will agree with you that on occasion (and I must state that these are rare), certain companies have over-stepped the bounds of scientific knowledge, good taste, and propriety in their advertising efforts. But I must point out that as the body of law now stands, if the industry or a segment of it got together to establish a code for the marketing and promotional practices, the group would promptly come under the flail of the Federal

Trade Commission and the Department of Justice for anti-trust violation. Government is notorious, you see, for saying "do as I tell you, not as I do" when it comes to regulatory practices. I want to make it clear that I favor advertising, both written and vocal. Competition in the long run keeps advertising claims within bounds.

In closing I would like to say a few things about profits, a subject which was constantly bandied about by the politicians of the Kefauver Committee, (you note, its chief counsel, Paul Rand Dixon, in what looks like a political pay-off, has been prominently mentioned as the next chairman of the Federal Trade Commission), as though profits were something unclean, evil, and asocial. I have great admiration for profits. Profits help pay my salary; provide me with secretarial and technical help; desks, bookcases and chairs for my office; money for laboratories, scientific equipment and supplies and have permitted us to raise and support a family; and profits (of someone) have been a major factor in providing you with your splendid laboratories, their personnel, equipment, etc. "But," say the 'Kefauverites,' "the profits are exorbitant!" Well, I think all Americans should have learned by this time to understand the devious ways of politicians when they are looking for votes. Never trust a statement on profits expressed solely as a percentage without knowing: a percentage of what? An example: company A is capitalized at five million dollars and sells one hundred million dollars of its product in a year. Its net profit after taxes (the Federal tax alone is fifty-two percent) is, let us say, five million dollars. What is its net profit? Five percent on sales, one hundred percent on its capital investment! The use of figures which will get the biggest headlines is an old trick of politicians.

Let me say in conclusion, that the profits of the pharmaceutical companies are used for research by the companies, for educational and research grants to institutions and individuals, and for the support of scientific personnel. Without decent profits many of the advances I have seen in the last forty years in therapeutics might not have occurred. I can think of no substantial advances which have not been made either by the pharmaceutical companies

alone or in conjunction with them other than insulin, liver products, penicillin, streptomycin, synthetic vitamin D, and one or two others. Even then, these companies have spent large sums for development. And believe me, for every winner, millions of dollars have been spent in research which did not result in a useful product. The inventor and licensees of tetracycline alone pay over $80,000,000 in corporation taxes to the government each year. Any move to curtail or administer prices, in my opinion, will mean that a number of Americans will have standards of living lowered (lower wages, fewer jobs), the Federal, State and Municipal governments will have less money (lower real estate and corporation tax takes, decreased expansion, etc.), the progress of medical and other sciences will be slowed down (decreased appropriations, public and private, for research), and the net result will be that the major sufferer will be the sick man because the standards governing his care will have declined. . . . .

Sincerely yours

Perry

Osler Said This . . .

ABOUT TWO-MAN MEDICAL PARTNERSHIP

I wish the custom of taking junior men as partners and assistants would grow. It has become a necessity, and no man in large general practice can do his work efficiently without skilled help. How incalculably better for the seniors, how beneficial to the patients, how helpful in every way if each one of you, for the first five or ten years, was associated with an older practitioner, doing his night work, his laboratory work, his chores of all sorts. You would, in this way, escape the chilling and killing isolation of the early years . . .

WILLIAM OSLER, M.D., 1849-1919.

Final article in a special series on patient records

What You Should Include In the Surgical Record

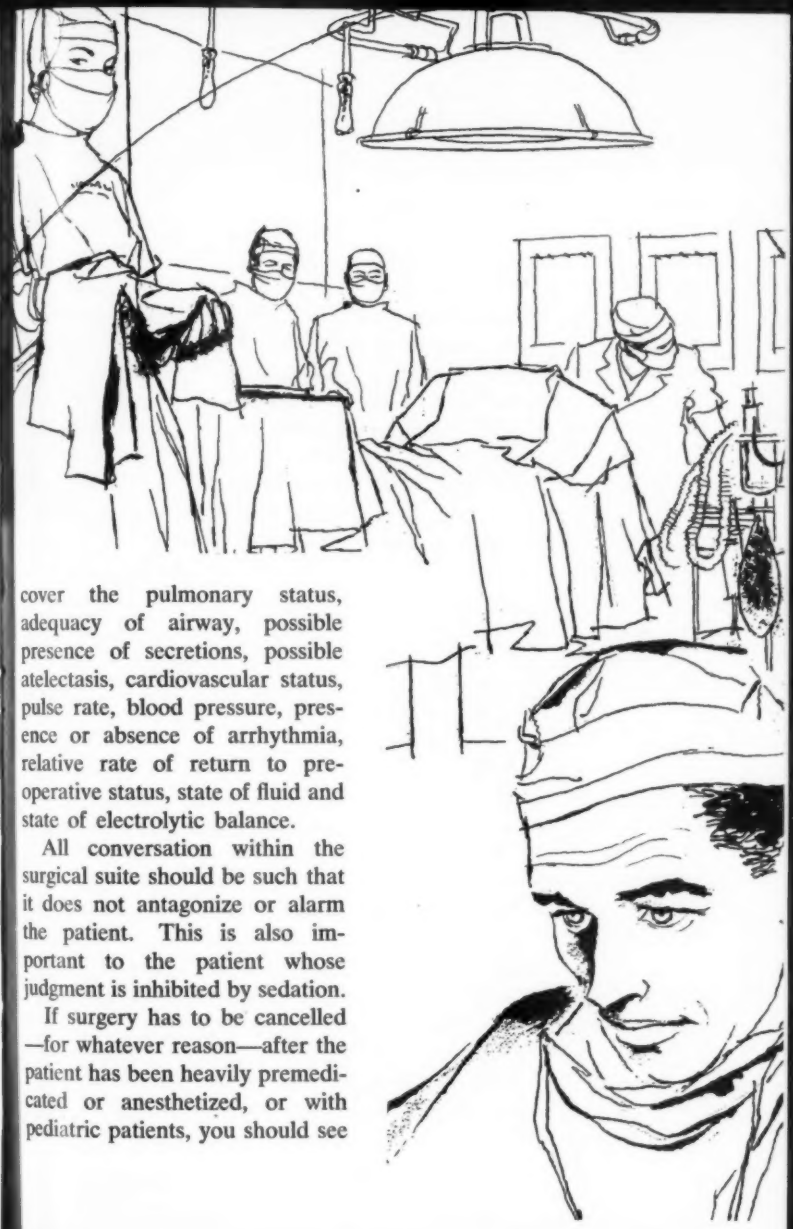
Mary D. Westover

Concise and pertinent notes are the key to complete —and legal—patient records

While most hospitals have printed forms which have been carefully prepared by an attorney, every surgeon should be completely conversant with the statutes in his own state covering permission for surgery, under every condition, and should see that the statement which is signed by the patient meets these requirements in every particular. This is primarily his responsibility. The ward clerk, attendant, or even the charge nurse cannot be presumed to have an equal interest or responsibility.

Printed forms are also used for the anesthesiologist's report. In addition to these, a preoperative and a postoperative note should be written in the chart by the anesthesiologist. The preoperative note includes all pertinent findings, such as blood pressure, pulse rate, etc., before anesthesia is started. This should also state that all necessary laboratory findings have been reviewed and evaluated by him (if surgery is elective) and that he is fully aware of the patient's condition, if emergency surgery is imperative.

The postoperative note should



cover the pulmonary status, adequacy of airway, possible presence of secretions, possible atelectasis, cardiovascular status, pulse rate, blood pressure, presence or absence of arrhythmia, relative rate of return to preoperative status, state of fluid and state of electrolytic balance.

All conversation within the surgical suite should be such that it does not antagonize or alarm the patient. This is also important to the patient whose judgment is inhibited by sedation.

If surgery has to be cancelled —for whatever reason—after the patient has been heavily premedicated or anesthetized, or with pediatric patients, you should see

that your chart contains this statement, "No surgery was done or attempted, and no anesthesia was given" (if this is true). State definitely the reason for cancellation.

Prepare and drape your "surgical field" *of record.* Regardless of who holds the sponge which does the cleansing, a completely sterile field and absolute asepsis are YOUR responsibility. If a catheter is left in place throughout the procedure, say so and describe the type of drainage. If debridement, copious irrigation, isolation of suppurative or contaminated areas, or other precautions of this type are necessary, state that these were carried out.

Record what type of dressing was used, even collodion or tincture of benzoin. If the wound was purposely left uncovered—as in burns—state why this was elected. If drains were used, how many, to what depth, brought out where, and secured how?

Verify hemostasis and record correctness of sponge count in closing. Again, you, not the nurses are responsible for postoperative complications secondary to either of these being incomplete or incorrect.

Do not be afraid to use, "There were no complications incident to the procedure, which was well tolerated," if true. State relative condition of patient in the immediate postoperative period.

Condition

It is often necessary to differentiate between "good condition" and "apparently good postoperative condition" when sending the patient back to the ward—and it is a good idea to make the distinction habitually. Often the surgery may be excellently tolerated by a patient whose systemic condition is anything but good.

Whether you set out your findings as your surgery progresses, or as a separate paragraph, record sufficient data to be of benefit in both future diagnosis and future management. Another doctor may be very anxious to know the very detail you have omitted. (Your patient may move to another community). Also, a complete, concise description of abdominal viscera, or of the extent of the disease process at the time of the surgery is invaluable where it is necessary to make a differential diagnosis at some later date. The chart should also state definitely why this particular operation rather than a similar one was elected by you.

When resecting any portion of the alimentary canal, set out prominently the type of anastomosis used. This is vital in future management and diagnosis, even years later.

If the disease process or the systemic condition of the patient presents a calculated risk in complete or delayed recovery, or if there are apt to be postoperative complications not attributable to the surgical technique, this should be explained to the patient and/or the responsible relatives in terms they can understand before the surgery is scheduled, and so *recorded.* The patient has every right to make the final decision, but once having made it, should share the responsibility for postoperative complications not directly attributable to technique.

1. If your incision is standard and described in the literature it can be minimized by saying, "The abdomen was entered through a standard ——— incision without injury to subsequent structures." The closure can be similarly minimized—but be *most* specific as to hidden technique which might affect either signs or symptoms developing at a future time.

2. If you go from contaminated tissue to clean tissue (burn dressings, breast biopsy followed by a radical mastectomy) *record* the measures taken to prevent spread of infection or neoplastic implants.

3. In putting a compressive dressing on a member, *record,* "so as to furnish firm, even pressure throughout, *without* compromise to the circulation."

4. In giving a preoperative or postoperative diagnosis, differentiate between "findings" and "disease entities;" e.g., "gangrene, left foot" as a diagnosis for an amputation might better be stated, "gangrene (or gangrenous changes) left foot, *secondary to* ———." If you are dealing with a disease entity (pneumonitis adenofibroma) give *site* in exact terms, including rights and lefts in anatomically duplicated structures.

5. Differentiate between "otomies" and "ostomies." If your procedure was a true "otomy," what did you remove, if anything, or was it exploratory only?

6. If a member is immobilized, give type of immobilization in the title of the procedure. This is a definite part of your therapy.

If there are actual technical errors (such as nicking a ureter

or a vessel), this should be stated in your operative report, together with the measures taken to remedy the error.

In the reports on the incision and draining of non-abdominal abscesses, break down all loculations *of record,* and include some statement that the wound was left (packed?) open to insure drainage and facilitate healing. State number, depth, exit and manner of securing any drains.

Where the surgeon is responsible for the anesthesia, as in local, topical or block anesthesia, be certain that your chart states *whether or not* there was a reaction to drugs or technique. This is particularly essential in office procedures.

The following should be of record in reporting inguinal herniorrhaphies on males:

- Preserve the nerves and vas in incision and dissection.
- State definitely whether there were contents in the sac, and if so were they adherent? *Record* that no viscera were damaged by lysis, and that any bowel present was examined and seen to be viable before returning it to the abdominal cavity.
- Rule out possibility of a femoral or direct component *of record.*
- Give general condition of the abdominal wall tissues as a reason for the type of repair you elected to do.
- In closing check both rings for size, and set out prominently (preferably in the title), the exact location of the cord structures. Was the external oblique closed over or under the cord?
- In pediatric patients were testes in anatomical position and cord intact and untwisted?

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as we go to press . . .

Overseas Dependents Cutback Halted. *President Kennedy has revoked the Eisenhower order to reduce the number of dependents accompanying servicemen overseas. To help cut overseas spending and reduce the U.S. balance of payments—the primary aim of the original order last November—it was indicated that brief leaves, involving tours of Europe, would be replaced by more extensive leave periods, permitting more frequent trips to the U. S. by our overseas servicemen and dependents. The announcement was greeted with enthusiasm by servicemen's families overseas, estimated to number nearly 500,000 persons.*

How the Law Views the Specialist

A specialist is a physician who holds himself out as having special knowledge, training and skill. Legally, he is held to higher standards of care and professional skill than is the general practitioner.

George A. Friedman, M.D., LL.M.

A specialist is "a physician holding himself out as having a special knowledge and skill in the treatment of a particular organ, disease or type of injury."[1]

When is a physician a specialist?

This is a question of fact, not law, and is decided by the doctor himself. When he decides that he is qualified to practice a specialty and receives and treats patients on this basis, then legally he is treated as a specialist. Thus, though he may not be a board diplomate, he is legally required to observe the same standards of care as a physician who is.

Standard of care

Plaintiff suffered from a nose ailment. Physician defendant, who held himself out to the public as a cancer specialist, advised plaintiff that he had cancer of the nose. During the treatment the end of plaintiff's nose became eaten away.

Plaintiff alleged either negligent diagnosis or negligent treatment. Defendant objected to having his diagnosis or treatment measured against a higher stand-

ard of care than that of a general practitioner. The Indiana Court in 1902 expressed the rule as follows:

"A specialist . . . is understood to mean a physician or surgeon who applies himself to the study and practice of some particular branch of his profession. Scientific investigation and research have been extended and prosecuted so persistently and learnedly that the person affected by many forms of disease is of necessity compelled to seek the aid of a specialist in order to secure the results thereof.

"The local doctor in many instances himself suggests and selects the specialist whose learning and industry have given him a knowledge in the particular area which the general practitioner, in rural communities especially, has neither time nor opportunity to acquire. Being employed because of his peculiar learning and skill in the specialty practiced by him (and compensated on the basis thereof), it follows that his duty to the patient cannot be measured by the average skill of general practitioners.

"If he possessed no greater skill in the line of his specialty than the average physician, there would be no reason for his employment; possessing such additional skill it becomes his duty to give his patient the benefit of it."[2]

The court went on to define the standard of care to which a specialist is held: He must have that degree of skill and knowledge which is ordinarily possessed by physicians who devote special attention to a particular disease or organ, its diagnosis and treatment. The same definition has been reiterated since that case by courts throughout the country.

Application

Plaintiff's medical history included a brain tumor operation in 1951, (and thereafter epileptic seizures). Later the same year plaintiff tripped and fell at work, landing on his left buttock.

Defendant, an orthopedic surgeon, after various examinations and tests, concluded that plaintiff suffered from a moderate tear in the internal ligament of the knee. Defendant also noted that the hip muscles were tight and rigid, which corroborated a condition of spasticity caused by the brain condition.

Defendant consulted the neurosurgeon who had performed the brain operation. The latter was in complete accord with the diagnosis made by defendant.

Fracture

A few months later the neurosurgeon, under whose care plaintiff remained, was attracted by indications of a hip fracture. X-rays revealed the fracture. The question for the jury was whether the fracture was caused by the fall in 1951, or was the result of Paget's disease in the hip area. Further, if the fracture was caused by the fall was defendant negligent in failing to x-ray the hip area?

Defendant's expert witness testified that it was the general practice of orthopedic surgeons to order x-rays of any particular part of the body whenever the doctor's examination or the history of the case discloses that such part of the body might be involved—that is, when there is something in the case that directs the doctor's attention to that part of the body and so makes him think an x-ray would be of value.

An x-ray is not taken unless there is a valid reason for so doing. If a patient suffers a fall and complains of pain in his left knee and the clinical examination does not disclose hip involvement, no x-ray of the hip would be ordered.

Plaintiff's testimony consisted mainly of statements concerning pain in the hip area he claimed he'd made to defendant at the time of the fall. Defendant denied these statements.

The court put the case to the jury thus: If you believe plaintiff complained of pain in the hip area, you may find defendant was negligent in failing to use x-ray. If, however, you think defendant's version is the true one, and there were no indications of involvement of the hip, the verdict must be for defendant.[3]

Conflict

In an unusual case some years ago, general practitioners disapproved a procedure used by some experts in the treatment of hernia. The court held it was not negligent for defendant, a hernia specialist, to employ the treatment. The accepted standards of hernia specialists ruled, despite disapproval by other members of the profession.[4]

Plaintiff sued defendant pediatricians for malpractice in treatment of plaintiff's son, as a result of which the infant died. One of the main contentions of negligence was defendants' failure to hospitalize the baby despite "breathing so heavy it could be heard downstairs," and a temperature of 104°. Expert testimony was to the effect that other pediatricians would have hospitalized

the infant, although general practitioners might not. The standard the court applied was that of other pediatricians.[5]

Other applications

Two obstetricians informed plaintiff she was pregnant. Plaintiff was dissatisfied with the diagnosis and consulted defendant, a tumor specialist, who declared plaintiff's ailment was cystic tumors, not pregnancy.

Defendant called in a surgeon for consultation, who agreed with defendant's diagnosis. Both defendant and surgeon were aware of the conflicting diagnosis of pregnancy. The surgeon operated but failed to find any tumors.

Some five weeks later defendant and his surgeon colleague discovered plaintiff was actually pregnant. The infant died soon after birth.

Plaintiff contended birth was delayed one month because of the alleged tumor operation, and that this delay, in addition to plaintiff's weakness and illness resulting from the operation, caused infant's death. Plaintiff was awarded $500 damages.

The court upheld the jury's verdict. It held that greater diligence and care is imposed upon a physician in making a diagnosis where other competent and reputable physicians have previously made a positive diagnosis in direct conflict with that of the physician in question.

Defendant should have delayed the operation, watched developments, and "proceeded with considerable deliberation unless the presence of tumors, becoming more symptomatic, or injurious, rendered the operation imperative."[6]

The courts have also held that a specialist is justified in treating patient for a specific ailment without making an independent examination or diagnosis thereof when patient has been referred to him for specific treatment by a reputable physician.

In one case, the family doctor diagnosed plaintiff's case as tumor, not pregnancy, and referred her to defendant, an x-ray specialist, for treatment. Plaintiff was actually pregnant. The case against defendant was dismissed.[7]

Joint liability

A general practitioner who refers a patient to a specialist does not thereby incur responsibility with the specialist for the results of the treatment. If, however, the general practitioner continues an active interest in the case, either by aiding in the diagnosis, taking active charge of the case, or par-

ticipating in the aftercare, both general practitioner and specialist are jointly liable.

The family physician referred patient to a specialist to reduce a fracture of the greater tuberosity of the right humerus. The two doctors, together with the roentgenologist, examined the x-rays and determined the treatment to be administered. The family physician looked on while the specialist set the fracture and applied the cast.

Thereafter the family physician visited the patient at home at regular intervals. When the cast was removed a month later plaintiff continued to have pain in her arm and was unable to bring her arm down at her side. Plaintiff consulted an orthopedic surgeon who discovered fracture of the shaft.

At the trial the jury brought in a verdict against both defendants. The family physician protested that the entire responsibility had been assumed by the specialist. The jury and court disagreed.

The family physician participated in the diagnosis and continued in active charge of the case after the cast was applied. He should have suggested additional x-rays to determine the position of the bones and progress of healing some time after the cast has been applied. The verdict against both defendants was upheld.[8]

Compensation

In 1930 plaintiff surgeons, husband and wife, performed a prostatectomy on defendant. He paid them $500 for their services, and they sued for an additional $250, claiming the value of their services was $750.

At the trial an expert witness, a physician who often referred prostate cases to specialists, testified that the charge was excessive, and that the average fee for services of specialists in that community (Denver, Colorado) for prostatectomies ranged between $250 and $500.

In response to the question: "Would you say that a charge of $500 for the operation would be the maximum chargeable by an outstanding specialist?" the witness replied: "Well that depends on the circumstances . . . the financial condition of the patient. Those fees are often made on a sliding basis, depending a good deal upon the financial or earning capacity of the patient.

"A man making $100 a month as an income . . . and a specialist knowing the man's financial status, would not charge him the same fee as he would a man hav-

ing an income of $25,000 a year." Judgment was for the defendant.[9]

In the absence of a contract for services the following factors will be considered in determining a reasonable compensation of the specialist: number of years in practice, standing in the profession in the community, experience, skill, custom, nature of the case and amount of attention it requires, the size of the town or city where services are rendered, and the financial status of the patient. In determining the fee courts have refused to consider patient's vocation, or the success of the treatment.

High fee

A physician obtained a judgment of $12,000 against a well-known motion picture actor for attending him for a period of 23 days during a bout of bronchial pneumonia. The actor was 56, afflicted with polyneuritis and Paget's disease, and in the habit of consuming one or two quarts of whiskey a day. Physician was a specialist in obstetrics, whose license had once been revoked. The revocation was vacated on certain terms and conditions.

Expert testimony at the trial was to the effect that the reasonable value of the services was $1,000 to $1,200. The trial judge refused to allow defense counsel to cross-examine physician on his usual charges and actual earnings in his profession. Physician testified that the reasonable value of his services was one-twelfth of defendant's income, which translated into dollars was $12,000. Much emphasis was placed on the defendant's vocation.

The appellate court reversed the judgment, and ordered a new trial. The large judgment rendered to a "physician whose past history in his profession is not without serious blemish" shocked its conscience. The court said that when "a doctor possesses a rare gift in the matter of professional accomplishments and the demand for his time and services becomes very great, he is entitled to a greater compensation than as though such were not the fact. . . . The physician in this case was a general practitioner with no special training or experience proved in treating pneumonia."[10]

In a case in workmen's compensation the trial court found that the employee suffered total and permanent disability because of his permanent disablement from silicosis upon which was imposed tuberculosis. The employer appealed the decision because the trial court accepted as

true the testimony of one general practitioner who stated that the employee had silicosis while rejecting the testimony of numerous specialists in the field that the employee did not have silicosis. The employer won the case.[11]

Qualification

A physician need not be a specialist in the field in order to qualify as an expert witness. Whether or not he is a specialist is considered by the trier of facts in determining the weight of the evidence. As the court said in a recent New Jersey case:

"The need for expert testimony does not mean that the witness must be a specialist, although the fact that he is not may be taken into consideration in weighing his testimony. 'Expert' here means skilled, that is, that the witness possesses special knowledge and skill upon the subject matter about which he is called to testify. And of course it has long been established that a person may qualify as an expert in the sense through actual experience, or theoretical knowledge based upon special study of the subject."[12]

To qualify as a specialist, an expert witness need not be a diplomate of a specialty board. But even if he has had forty years of practice and experience in the field much will be made upon cross-examination of his lack of board certification.

Doubt cast

In a case of a femoral neck fracture defendant's attorney admitted the qualifications of plaintiff's general surgeon upon direct examination. Whereupon plaintiff's attorney dispensed with the usual twenty minute recitation of qualifications by the surgeon, who had testified he specialized in general and traumatic surgery. But notice what happened on cross-examination by defendant's lawyer.

Q. *Incidentally, doctor, you said you do general surgery and also traumatic surgery, is that right?*

A. Yes.

Q. *Have you taken the training and residence to apply to the Board of Orthopedic Surgeons?*

A. No.

Q. *By an orthopedic surgeon, what do you mean, Doctor?*

A. Surgery which deals with the diseases and injuries of bones.

Q. *That is, your practice in orthopedic surgery has been along with your general surgery and general practice?*

A. I finished . . . . . University in the year 19—, in June,

and I spent one and one-half years in routine internship.

Q. *I didn't mean you, doctor. I didn't mean to go back to your training. Well, let me ask you: if I were to call the . . . . . medical society to ask if you were certified as an expert in orthopedic surgery, they would say no would they not?*

A. Yes.

And so on. The witness is asked to describe the qualifications for certification by the board, of which he is not a member. The witness is asked whether he ever applied for certification, whether he were qualified to apply if he so desired.

Despite the attempt of plaintiff's attorney to rehabilitate the witness on re-direct examination by permitting him to expound at length on his experience and training, this type of examination gets across to a jury, to the mortification of the witness and perhaps to this disaster of plaintiff.

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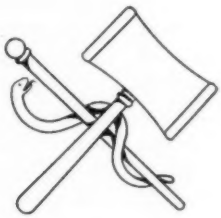


SPECIAL **RESIDENT PHYSICIAN** SURVEY

House Staffers are Leading the Foreign Car Parade

Here are facts about the cars you own, based on a nation-wide survey of residents and interns.

Larry Newman

Is it economy, style features, the fashion, the initial cost, a lack of parking near hospitals, or a dislike for Detroit's "bigger and better" trend in automobile manufacture?

Whatever the motivation, a recent survey by your journal among nearly 4,000 residents and interns, turned up the fact that 15.4% of house staff car-owners were driving a foreign-made job.

Needless to say, the Aston Martin, the Alfa Romeo, and the Rolls Royce were not the hottest items on the list.

Yet, the high percentage of imports owned by house staffers is nearly *8 times the national average!* U. S. automobile registration figures show little more than 2% of all cars on the road today are of foreign manufacture.

Our survey also shows that the percentage of residents and interns owning cars of any make or manufacture has increased over the past five years. A 1956 RESIDENT PHYSICIAN survey showed 87.7% of house staff physicians owned cars. Our current survey shows the figure to be up to 91.8%. For married

TABLE 1 CARS OWNED BY HOUSE STAFF PHYSICIANS

OWN	ALL PHYSICIANS	SINGLE PHYSICIANS	MARRIED PHYSICIANS
American Cars	**84.6%**	**78.3%**	**85.7%**
CHEVROLET	23.6	20.7	24.2
FORD	18.5	15.8	19.2
PLYMOUTH	10.3	7.1	11.0
OLDSMOBILE	5.9	4.3	6.1
PONTIAC	5.1	6.5	4.7
BUICK	4.2	3.3	4.3
MERCURY	3.3	3.8	3.3
RAMBLER	3.1	2.7	3.1
DODGE	2.9	2.7	2.9
OTHERS	7.7	11.4	6.9
Imported Cars	**15.4%**	**21.7%**	**14.3%**
VOLKSWAGEN	5.8	7.1	5.8
RENAULT	1.2	0.5	1.4
TRIUMPH	1.0	2.2	0.8
AUSTIN	0.7	1.7	0.6
SIMCA	0.7	1.1	0.6
MG	0.7	1.7	0.6
HILLMAN	0.7	1.7	0.4
MERCEDES	0.6	1.1	0.4
OPEL	0.5	0.5	0.6
PUEGOT	0.5	0.5	0.5
SAAB	0.4	0.5	0.2
OTHERS	2.6	3.1	2.4
TOTAL	100.0	100.0	100.0

men, the figure is 96% while only 82% of house staff bachelors own cars. Interestingly, the percentage of car ownership is higher for married house officers with children than for married men who have no children.

Item: Two out of three married house physicians bought their cars new while only one out of two single men made a new car purchase.

Preference

In the Table, preferences in makes of cars for married and single house officers are shown. More than one in five single house staffers own imports while only one in seven married staff officers can make that claim.

The top choices among American cars are Chevrolet, Ford and Plymouth, while the imported cars with the highest sales among house officers are Volkswagen, Renault and Triumph.

Further investigation shows that 21% of the married house physicians who have no children own imported cars, whereas only 11% of married house physicians with one child own these cars. The most striking difference between the two groups was shown in individual makes. In the former group, 22.8% own Chevrolets and 7.7% own Volkswagens; in the later group 30.2% own Chevvies and 6.5% own Volkswagens.

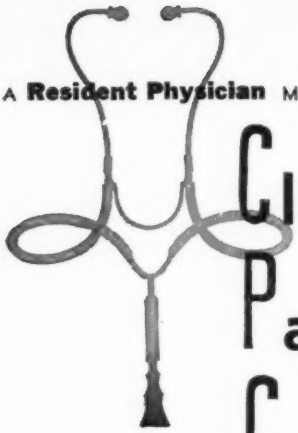
Working Wife

Another variable was nailed down in determining the employment status of the house staffer's wife. Approximately one-third of all wives are working at the present time and this group owns *one* imported car for every *four* American makes. In the group where the wives are not working, *one* imported car is owned for every *eight* American makes.

In the final analysis, if you are an unmarried resident or intern, the probability of your owning a car is high, but not as high as your married colleagues. And the probability of your owning a foreign car is about 1 to 4, whereas the married house staffer's is 1 to 6.

The house staff physicians' level of acceptance for the small foreign car is well above the level demonstrated by the general public. It will be interesting to note, using residents and interns as a barometer, whether Detroit's efforts in recapturing the share of the market now held by foreign manufacturers will be successful in the coming year.

A **Resident Physician** MONTHLY FEATURE



Clinical Pathological Conference

George Washington University Hospital, Washington, D.C.

Patient: a 42-year-old white banker, admitted 7/5/58. The patient was in apparent good health until 1956 when he gradually noted the onset of fatigue. During periods of stress in his job with the World Bank, he had episodes of epigastric burning which was usually relieved by rest. Food did not influence the discomfort, and he took no antacids. In March 1958 he traveled for 3 weeks in Holland, Italy, Austria, India and Ceylon. While in Austria he had an episode of diarrhea which lasted for two days. Following this he continued to have alternating periods of constipation and diarrhea. His bowel movements contained mucus but were not watery or bloody. About four days prior to admission he developed fever which during the next few days reached 102° F. He was treated with Achromycin without effect. Two days PTA he developed severe diarrhea with dark brown stools containing bright red blood. There was no associated nausea or vomiting.

During the two years PTA he

MEDICAL DISCUSSION:
Dr. Howard Ticktin, associate in medicine

SURGICAL DISCUSSION:
Dr. Richard Thistlethwaite, assistant clinical professor of surgery

PATHOLOGICAL DISCUSSION:
Dr. Frank N. Miller, associate professor of pathology

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lost about 20 pounds, half of this loss having occurred in the last 3 months.

PAST HISTORY: During annual physical examinations his leukocyte counts were 11,000 in 1955 and 16,000 in 1957 with normal differentials.

PHYSICAL EXAMINATION: BP 100/80, P 100, R 16, T 38.8. He was well developed and "almost cachectic." The abdomen was almost doughy and flat. Bowel sounds were active, and loops of bowel containing gas were palpable. No other organ or mass was palpable. The prostate was not enlarged. Fluid feces were found in the rectum without gross blood.

ON ADMISSION: Hgb. 12.7 grams %, VPC 40, WBC 29,350 with 76% segs, 7% bands, and 17% lymphocytes, toxic granulation noted. *Urine:* Sp. gr. 1.029, albumin and sugar negative. Serology negative. ESR (corrected) 34. A chest film showed minimal calcification in the upper lung fields. There was no free air under the diaphragm. In the abdomen several distended loops of small bowel containing air-fluid levels were present in the midportion.

HOSPITAL COURSE: On 7/6 an exploratory laparotomy was carried out. The appendix was normal. Pus exuded from the upper part of the abdomen and the subhepatic space. A large subhepatic abscess was drained. A culture of its pus grew out coagulase-positive Staphylococcus aureus. There was no evidence of a perforated viscus, and the abscess was thought to have arisen from a posterior perforation of a duodenal ulcer in the recent past. A biopsy of the liver and abscess wall showed nonspecific cholangiolitis. No parasites were found.

Postoperatively the patient did well except for a persistent fever. His temperature showed daily fluctuations from 37 to 39 degrees despite extensive antibiotic therapy. An abdominal film on 7/10 revealed gaseous distention of the large and small intestines with air-fluid levels in the erect

position. On the following day the white count was 32,100 with a marked shift to the left. A chest film on 7/14 was negative, and on 7/19 an abdominal film revealed small amounts of gas throughout the colon. Several distended loops of small bowel showed air-fluid levels in the erect position.

A barium enema on 7/21 demonstrated no evidence of obstruction or filling defect in the colon and terminal ileum. Two days later an upper GI series was normal except for an apparent constriction of the tip of the duodenal bulb and an increased density in the RUQ suggesting liver enlargement. On 7/24 about 250 cc. of pus erupted from the Penrose drain site, and about 100 cc. drained two days later. WBC 26,500 with 80% segs, VPC 34, urine negative.

On 7/26 a multilocular abscess of the abdominal wall was drained. A culture of the wound drainage showed coagulase-positive Staphylococcus aureus. A chest film on 7/29 showed a small amount of fluid at the left costophrenic angle with minimal infiltration of the left lung base.

On 7/31 an abdominal film showed a homogeneous increase in density in the upper portion of the abdomen with a small collection of gas in the RUQ which was thought to lie outside of the GI tract. The patient developed moderate abdominal distention. The feces were negative for ova and parasites. *Cephalin flocculation:* 24 hours 2+, 48 hours 3+. On 8/6 the serum alkaline phosphatase was 4.8 units %, total proteins 5.7 gm.%, A/G .84, BUN 17 mg.%, amylase and lipase within normal limits. On 8/9 blood was found in the feces. He had developed a bilateral pleural effusion. The abdominal wound continued to drain, and Pseudomonas became the predominant organism. Prothrombin activity was 41% of normal. On 8/11 his temperature spiked to 40°, dropping to normal early on 8/12. He was found dead in bed at 4:50 a.m. on 8/12.

Discussion

DR. TICKTIN: This is a relatively young man, a 42-year-old banker, who we are told was well until approximately two years prior to the onset of this illness. The symptoms at that time were nonspecific: fatigue and some epigastric burning pain which were relieved by rest, but not by food. There was some weight loss, approximately 10 lbs., over this period of about two years. However, something rather acute

occurs with this man, approximately 4 months prior to admission, when he visited a number of foreign countries. The ones that interest me most are India and Ceylon since we wonder about more esoteric infectious diseases, although the other countries mentioned are not immune. He developed what appears to be a self-limited episode of diarrhea which lasted for several days. There is no history of diarrhea previously. Following this, however, there is a definite change in this man's bowel habits. He develops mucus in his stool and has alternating periods of constipation and diarrhea. Apparently he had no fever or other symptoms over this period of 3-4 months. Then we have an acute problem superimposed about 4 days before admission, when he developed a fever of 102° F. He was seen by a physician and started on Achromycin and subsequently developed severe diarrhea which was bloody, a bright blood which I assume came from the lower GI tract. One would wonder whether the Achromycin itself might play a role in the development of this bloody diarrhea since the problem of enterocolitis secondary to the use of broad spectrum antibiotics is a real one. An occasional patient may even develop an acute fulminant bloody diarrhea, fever, prostration and death. However, this complication does not seem to fit this man's clinical course.

Examination

The past history reveals that on two occasions as part of annual physical examinations he had leukocytosis. The count of 16,000 occurred during the time he was complaining of fatigue and weight loss.

Physical examination reveals several findings which are worthy of comment. It is obvious that the patient is suffering from a rapidly progressive illness characterized by cachexia. Examination of the abdomen reveals findings consistent with ileus of the bowel. There are no organs or masses palpable and no mention of abdominal or lower chest wall tenderness. I think that this is an important point as I'll try to bring out a little later.

The laboratory data are not very helpful. I am impressed with the minimal anemia in the face of his cachexia. Of course, he may well have been dehydrated by his illness and the acute diarrhea. He has a marked leukocytosis with a shift to the left. A chest film shows calcification in the upper lung fields, but I see

no acute process. The flat plate of the abdomen corroborates the physical findings.

Etiology

We are next told that this man has an abscess in his upper abdomen and the question that is left to us is the exact etiology. I think his hospital course with few exceptions is a reflection of the complications of this abscess. This brings several points to mind in the differential diagnosis. Being in a foreign country, especially in India and Ceylon, with the acute onset of diarrhea and then the persistence of constipation and alternating, diarrhea certainly suggests intestinal amebiasis. I have been told by Dr. Miller that sigmoidoscopy was not performed nor were fresh stools examined. This would have been quite helpful, but certainly had they been performed and were negative, would still not rule out this diagnosis. In view of the calcification in the upper lung fields and cachexia, one has to think about lympho-hematogenous tuberculosis plus tuberculous peritonitis. However, I am not aware that one sees purulent abscesses in the abdomen as a complication of tuberculous peritonitis.

The possibility of lymphomatous disease must be considered. The white counts that were elevated some time earlier, but with normal differentials does not help me in this direction, nor is there anything else to confirm this diagnosis.

DR. THISTLETHWAITE: At laparotomy the surgeon encountered an abscess in the right upper quadrant. An abscess in the right upper quadrant, of course, immediately localizes our thinking to certain areas of the abdomen. Perhaps the most common abscesses we encounter intraperitoneally are those arising from the gastrointestinal tract. I think there are some things given to us by which we can eliminate practically every cause of such an abscess from the gastrointestinal tract. First of all, probably the most common entity would be appendicitis, and we are told here the appendix was normal.

Another common condition would be diverticulitis of the colon which would most probably be in the sigmoid colon, and there is nothing in the protocol or the barium enema which is subsequently performed to indicate that there was diverticular disease. Likewise, we think of the possibility of a perforating malignancy usually of the colon and the barium enema, of course,

rules this condition out. Another common cause for gastrointestinal tract perforation giving rise to an intraperitoneal abscess is a foreign body. Again we see no evidence of fistula on x-ray and all these conditions, I think, are ruled out by the fact that they usually lead to an abscess cavity with a bad odor and which would not culture out Staphylococcus, but would be more apt to culture out Escherichia coli.

For a perforated peptic ulcer I see very little evidence. On the subsequent upper GI series we see absolutely no indication of peptic ulcer disease. So that leaves us now with other organs in the right upper quadrant to give rise to an abscess.

The gallbladder can give rise to an abscess by a process of acute cholecystitis and subsequent perforation and abscess formation. A malignancy of the gallbladder can do the same thing. Against this is of course the age of the patient, that fact that we are dealing with a male, and that we have no specific evidence of previous biliary tract symptoms.

The pancreas likewise can give rise to an abscess in the right upper quadrant. As a rule it is secondary to acute pancreatitis and pseudocyst formation. These can become secondarily infected, and there is nothing in the protocol about operative findings that rules this out. As a rule we expect the surgeon to describe soap bodies or something of that nature in the omentum or mesentery.

Abscess

The liver itself can give rise to an abscess of this nature. The commonest cause would be the amebic abscess. In addition it is possible to have an abscess secondary to a necrotizing process within the liver, although it is amazing to see how bulky and necrotic the liver can become, and yet seldom do we find it secondarily infected. Retroperitoneal abscesses are more apt to drain down along the lumbar gutter to the inguinal ligament area or back to triangle. They seldom perforate into the peritoneal cavity. Tuberculosis is difficult to completely rule out, although I've never personally seen a tuberculous peritonitis that had secondary infection. I don't think the operative findings are compatible with tuberculosis. I think fungus diseases should be considered. Perhaps the highest in this list would be actinomycosis, but I don't believe we have enough evidence here to go along with this diagnosis.

DR. TICKTIN: I would agree with Dr. Thistlethwaite and would make one added observation and that is when one considers the biliary tree as a site of abscess formation, there is one malignancy, although rare, which may subsequently form an abscess, which is more common in the male, and that is carcinoma of the common bile duct.

In essence then we are dealing with a patient who has an irritative colonic lesion by history and by stool examination, and whose GI series and barium enema is negative. I'm going to make the assumption that this right upper quadrant mass is contiguous with the liver and therefore I am dealing with the differential diagnosis of a purulent hepatic abscess. When one thinks about this, it is not a common lesion; rarely today it arises from a septicemia, the organisms arriving via the hepatic arterial system. It may arise secondary to obstructive biliary tract disease or may originate in the GI tract travelling via the portal system such as seen with amebic colitis.

It is stated that in the United States approximately 10% of the population are harboring Endamoeba histolytica in their stools; some studies have shown this figure as high as 20% of the population who are "in the carrier state."[1,2] The ability to find the ameba depends upon experience and effort in stool examination. A number of observers have noted the difficulty in finding the ameba after administration of broad spectrum antibiotics. This probably relates to the metabolism of the ameba. Some of its metabolic needs are probably met by the flora of the GI tract.

It is now well recognized that a patient may never have bowel symptoms and yet develop amebic hepatic abscesses. One large retrospective study on 90 patients with liver abscess revealed 12% at postmortem examination had no intestinal involvement.[3] Thus negative sigmoidoscopy and barium enema do not necessarily eliminate the possibility of amebic infection.

Size

I am bothered here by the size of this liver. In some of the literature on amebiasis an enlarged tender liver is a *sine qua non* of amebic abscess formation.[4] However, at the time this man was brought into the hospital, he had already ruptured this abscess into his peritoneal cavity which may account for the lack of tender hepatomegaly. In observation on large numbers of amebic

abscesses, it is not unusual to see a very dramatic decrease in the liver size and loss of tenderness with rupture of the abscess. If one aspirates an amebic abscess, the subsequent liver shrinkage often cannot be accounted for by the volume of pus removed. There has been experimental work to suggest a reflex neurovascular mechanism within the liver, such that following stimulation there is hepatic venous spasm with blockage of blood within the liver.[4]

I was bothered by the purulent exudate found at laparotomy since one is accustomed to thinking of anchovy-like paste as being the typical finding in amebic abscess. I would like to quote from an article by Lamont & Pooler in the *Quarterly Journal of Medicine*,[4] "In 106 cases pus was aspirated from the liver. In 14 of these cases the abscess also subsequently ruptured into adjacent viscera or serous cavities. Three types of pus were aspirated: (1) frankly purulent (36 cases); (2) "anchovy" pus (43 cases); (3) blood mixed with pus (27 cases). The first type needs no qualification. The distinctive feature of the second type was the presence of apparently necrotic liver tissue, giving the "anchovy" appearance. The nature of the pus in the third type was established by microscopic examination. In 13 of the 106 cases (12 per cent) bacteria were isolated by aerobic or anaerobic culture."

There is some evidence that the mechanism involved in formation and progression of the hepatic abscess is of an immunological nature. One group of investigators found that injection of amebae into the portal circulation of mice failed to produce any hepatic lesion. If, however, intestinal amebiasis had previously been established, a hepatic lesion could then be produced by intra-portal injection of amebae. Such lesions resemble localized infarcts with the ameba identifiable within the lesion.[5] Also, it has been noted that the incidence of positive complement fixation test for Endamoeba histolytica is much higher in amebic liver abscess than in uncomplicated amebic colitis.

Pleural effusion

The progressive pleural effusions noted in the patient's hospital course suggest the possibility of several processes. The incidence of rupture of amebic abscess is high—in one study *41* out of 90 abscesses ruptured.[3] Statistically the chance of rupture


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through the diaphragm into the chest is higher than rupture into another organ or the peritoneal cavity. Thus one might wonder if the effusions are reflecting such a rupture. His earliest effusions are noted on the left, we would have to assume an abscess probably arising from the left lobe of the liver. However, the incidence of multiple abscesses are quite high and could account for the bilateral effusions noted later.

The effusions may be sympathetic, reflecting the obvious widespread subdiaphragmatic process. However, this is a cachectic patient, approaching the terminal stage of his illness when the effusions are noted and I have become quite impressed with the incidence of pulmonary embolization and infarction in this group of patients. The lack of a peripheral site for origin of the emboli is not unusual and would not dissuade me from this possibility.

I will terminate my discussion now. My final diagnosis in this 42-year-old man is amebic colitis followed by amebic hepatic abscess formation which subsequently ruptured into the peritoneal cavity. His actual demise was due to complications of the peritonitis and multiple pulmonary emboli and infarction.

Early symptoms

DR. JOSEPH ROE, JR.: Dr. Ticktin, how do you explain that this abscess was secondarily infected with Staphylococcus aureus?

DR. TICKTIN: I can't explain it; however, in Lamont & Pooler's 106 cases, bacteria were isolated in 12%. Included was one case with a pure culture of Staphylococcus aureus.

DR. CHARLES HALLEY: This patient's travels in 1958, after which he developed diarrhea, was the beginning of the illness but the protocol records fatigue and other symptoms beginning 2 years earlier. Do you think these symptoms are due to amebiasis beginning before 1958 or do they have some other explanation?

DR. TICKTIN: I found nothing within the protocol helpful regarding the significance of his earlier symptoms and weight loss. I would assume he contracted his amebiasis while overseas, although it is possible he had been harboring the organism for some time with exacerbation 4 months prior to admission. One could possibly account for the epigastric distress on the basis of a duodenal ulcer which the surgeon must have had some reason for incriminating. The possibility of malignancy exists here.

This has been discussed by Dr. Thistlethwaite. I found nothing here to go along with a malignancy. I am impressed with the findings of a right upper quadrant abscess which at the time of laparotomy and subsequent x-ray examination does not incriminate the GI tract. This problem has been discussed by others and they suggest that this is the patient who should be treated quickly with Emetine.

DR. SOLOMON BARR: Do we have to postulate a pre-existing amebic abscess as a cause of the peritoneal abscess. Couldn't there have been a direct perforation of the bowel?

DR. THISTLETHWAITE: We find no evidence other than the possibility of the posterior perforation of the duodenum that there is lack of continuity in the bowel anywhere in this patient. I think we can rule out most of the colonic perforations by the type bacteria encountered. Perhaps the best evidence that this might be a perforated duodenal ulcer is that we note in studying postoperative wound infections the commonest organism encountered in this type of infection is a staphylococcus. The incidence is perhaps 5%. I ruled out a perforating ulcer on the basis of having an almost completely normal GI series subsequently. What might account for the fact that the liver was normal in size is that sometimes an intrahepatic amebic abscess will rupture into the biliary tree and drain itself through the biliary tract, and therefore one would not have liver enlargement.

DR. TICKTIN: Lamont & Pooler in their article describe the hazard of rupture of adjacent amebic abscesses following aspiration of one. In other words, emptying one abscess may destroy the support of adjacent abscesses.

Autopsy

DR. MILLER: At autopsy this patient was well developed and emaciated. There was a questionable icterus. An open epigastric wound measuring 6 x 8 cm. and extending into the abdominal cavity was found. The stab wound in the right flank and the edges of the major wound were covered with a grayish-yellow fibrino-purulent exudate. There was also a healing pararectus scar, the original laparotomy wound.

The upper abdominal wound extended to the diaphragmatic surface of the liver, and the abscess which had been drained was walled off by the inferior

surface of the right lobe of the liver, the second part of the duodenum, the right side of the transverse colon, and the posterior peritoneal wall.

The abscess was 10 cm. in diameter and was filled with thick purulent material. There was a left subphrenic abscess measuring 10 cm. in diameter adjacent to the spleen, and this abscess communicated with the left intrahepatic abscess. The peritoneum was clear below the level of the umbilicus. In the pleural cavities there were 600 cc. of thin turbid fluid on the right and 400 cc. on the left. The heart was not unusual.

The lungs were quite heavy, each weighing over 1,000 gm., and showed besides congestion and edema, regular firm, matted foci in both lower lobes. These microscopically proved to be confluent bronchopneumonia.

There was no evidence of pulmonary embolism. The gallbladder was thin-walled, smooth, and contained 20 cc. of bile and showed no abnormality.

The spleen was increased in weight to 280 gm. and its capsule was covered with a fibrinopurulent exudate. Microscopically, the reticuloendothelial cells of the spleen showed a heavy pigmentation with iron - negative pigment which was interpreted as malarial pigment. The brain was slightly edematous but otherwise not unusual.

The liver was heavy, weighing 1,900 gm., and had an 8 cm. ruptured abscess in the right lobe which reached the diaphragmatic surface and was continuous with the abscess in the abdominal wall. A second rupture of this abscess was present on the inferior surface of the right lobe of the liver. There were other small abscesses, including several in the left lobe of the liver. In the right portal vein there was a septic thrombus, and small thrombi were found in branches of the left portal vein.

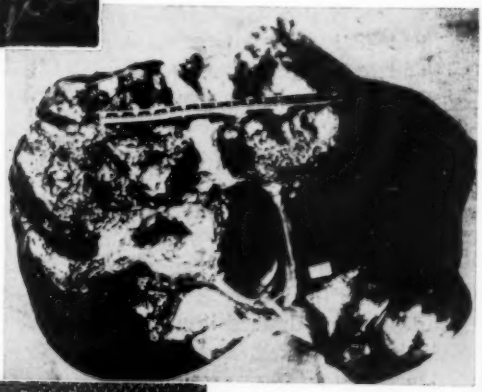
Perforated

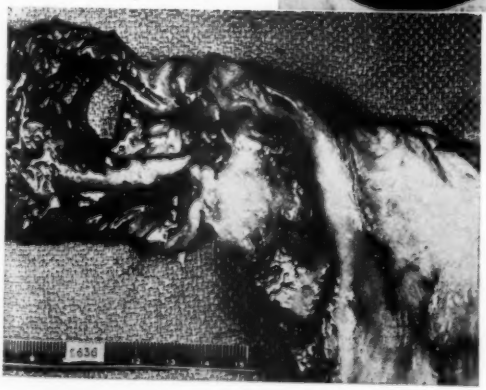
In the Kupffer cells of the liver there was a heavy pigmentation which was interpreted as old malarial pigment. The distal part of the first portion of the duodenum was adherent to the liver, and when the duodenum was explored two perforated ulcers were found, both of which were continuous with the abscesses in the liver. One was 4 cm. from the pylorus at the junction of the first and second parts and measured 2.5 x 1.5 cm. and the other was just distal to this and smaller, measuring 1.5 x 1 cm. The hepatic abscess formed the bed of

Fig. 1 In situ photograph showing large amebic abscess in right lobe of liver and smaller abscesses in the left lobe.

Fig. 2 Inferior surface of liver showing perforated amebic abscesses in both lobes.

Fig. 3 First part of the duodenum demonstrating two perforations of hepatic abscess into duodenum.





both of these ulcers. The only other findings of any significance were small ulcers in the cecum and colon.

The microscopic sections of the abscess in the liver revealed purulent material within which organisms consistent with Staphylococcus aureus were found. The small ulcers of the colon showed numerous trophozoites of Endamoeba histolytica. This man had had underlying amebiasis, and the organisms had entered the portal venous system with the formation of multiple abscesses in the liver. One of these abscesses had become adherent to the duodenum and had perforated through its wall. Material from the amebic abscess of the liver had entered the duodenum and drained in that fashion. An abscess had also ruptured into the upper peritoneal space and produced a subhepatic and left subphrenic abscess. The final diagnoses in this case were:

Immediate cause of death—Confluent bilateral bronchopneumonia. Underlying this were multiple hepatic abscesses due to Endamoeba histolytica with superimposed infection by Staphylococcus aureus and Pseudomonas aeruginosa. The contributory diagnoses were a left subphrenic abscess, perforated ulcers of the duodenum secondary to a hepatic amebic abscess, amebic colitis involving the cecum and ascending colon, congestion and edema of the lungs, pleural effusions, and pylephlebitis.

Under incidental findings there were nodular goiter and malarial pigmentation of the liver and spleen. The historical diagnoses were: (1) status 1 month post-laparotomy and drainage of the subhepatic abscess and (2) status 17 days post-drainage of an abscess of the abdominal wall.

Films

The first picture (Fig. 1) shows the hepatic abscess *in situ* at the time of autopsy. The abscess lies in the right lobe of the liver.

The next picture (Fig. 2) shows the abscess after the liver was removed. This is the inferior surface of the liver showing the very extensive abscess involving the liver.

The next picture (Fig. 3) shows the two perforated ulcers at the junction of the first and second parts of the duodenum which were due to perforation from the liver into the duodenum. We believe this because of the fact that amebae were found in the wall of the duodenum just at the edge of one ulceration. A

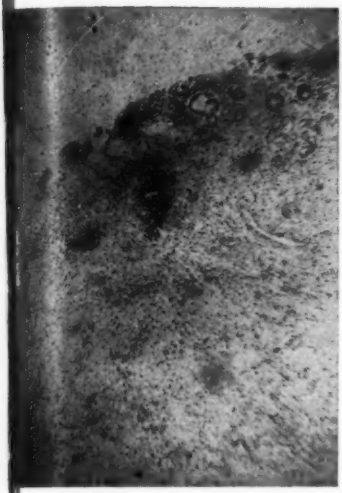
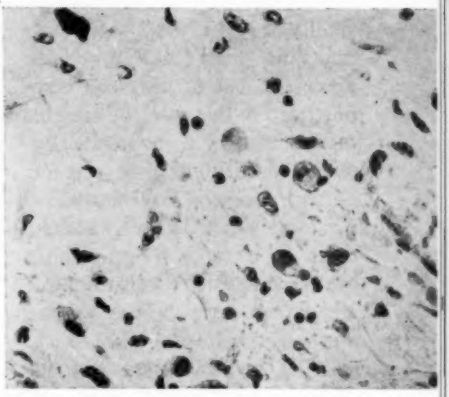


Fig. 4 Edge of amebic ulcer colon (x 23).

Fig. 5 Trophozoites of Endamoeba histolytica in colonic ulcer (x 290).



few amebae were also found in the liver, although the abscesses there had been overgrown by staphylococci.

This picture (Fig. 4) is a low-power view of the colon showing an ulcer with a slight inflammatory response. The usual undermining of the mucosa with the formation of so-called flask-shaped ulcers typical of amebic colitis is not present here.

The next picture (Fig. 5) is from the floor of an ulcer of the colon. It is a high power view showing several trophozoites of Endamoeba histolytica. In one ameba an erythrocyte and a vacuole are present in the cytoplasm. This phagocytic capability differentiates Endamoeba histolytica from the non-pathogenic amebae which infest the colon. Endamoeba histolytica may travel in the portal veins to the liver and set up abscesses which occur in about 40% of fatal cases of amebic dysentery.

DR. M. THANGAVALOU, *Dean of the School of Medicine, Kerala, India:* It is the type of material which we commonly see in India. When we see multiple abscesses in the liver a common complication is a purulent empyema as a result of an amebic abscess rupturing through the diaphragm into the pleural cavities. Another complication which we see is purulent abscesses in

the cerebral cortex as a result of hematogenous spread of amebae.

There have been occasions when surgeons discussed the possibility of gastric ulcer perforating into the liver and producing abscesses, but as has been demonstrated in this case, we are able many times to demonstrate Endamoeba histolytica at the site of perforation. One other complication which is seen in these cases is a type of gangrenous colitis associated with multiple amebic abscesses where we are absolutely helpless. That is, in spite of hospitalization and administration of any type of antiamebic drug or any type of broad spectrum antibiotic, they die within a few days. The colon is just a mass of gangrenous, dark stuff and if you touch it, it perforates at all points.

Then, another type of amebiasis which we observe, especially in elderly persons, is an ameboma associated with abscess, intestinal ameboma leading to intussusception. And last year I saw two cases in elderly women where there was in addition to dysentery symptoms, an ulceration of the vagina, which was for a long time mistaken as a granulomatous ulceration of venereal origin; but it was easy to demonstrate in these cases, vegetative forms of Endamoeba histolytica.

Discussants' Diagnoses

- Amebic colitis followed by amebic hepatic abscess formation with rupture into the peritoneal cavity.
- Multiple pulmonary emboli with infarction.

Pathologic Diagnoses

- Amebic colitis.
- Multiple amebic abscesses of the liver with perforation into the peritoneal cavity and duodenum and secondary infection by Staphylococcus aureus.
- Confluent bronchopneumonia.

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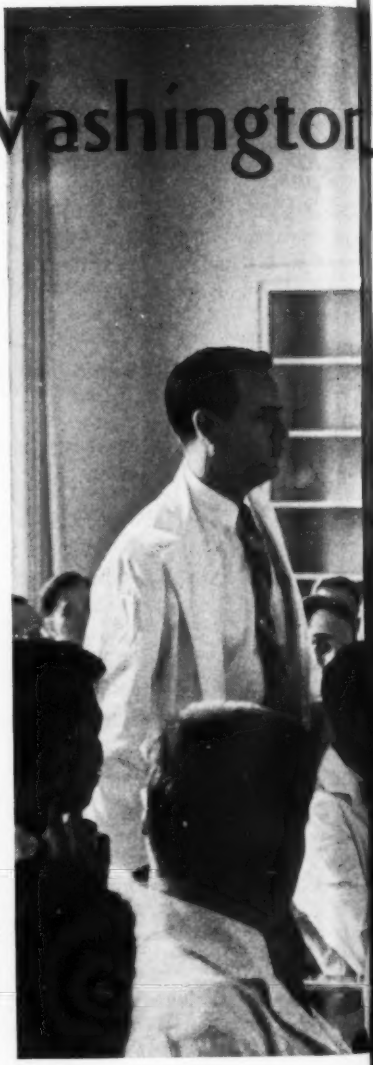

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development plan which will increase bed capacity to 550 while adding a new medical school building, clinics, laboratories and doctors' offices, a center for chronic diseases, rehabilitation and research, and an addition to the Warwick Memorial building.

The Warwick building, adjacent to the hospital, was completed in 1954 as the University's cancer detection clinic; it houses special laboratories for research diagnosis, and treatment of cancer.

The Hospital, equipped with facilities for 16 specialty fields, records 17,000 adult patient admissions each year; births number approximately 3800 yearly. Visits to the outpatient clinic approximate 50,000 a year, and some 13,000 patients enter the emergency room each year. The autopsy rate has been maintained at the high level of 70% to 75%.

Staff

There are 25 geographically full-time physicians on the staff, including chiefs of service. There is also an active staff of 200, consisting of the teaching staff of the University's School of Medicine, plus an additional courtesy staff of approximately 300. Hospital personnel, excluding house staff and medical staff, numbers approximately 950, including about 240 graduate professional nurses and an equal number of practical nurses and auxiliary nursing personnel.

Research facilities

A 23,000-volume branch of the School of Medicine's library is maintained at the hospital for use of residents, interns, and students. The house staff can also arrange to use the School of Medicine and University libraries as well as many outstanding city and federal library and record collections.

Washington affords many unexcelled facilities for medical research. The Armed Forces Institute of Pathology, on the grounds of Walter Reed Army Medical Center, has a collection of anatomical and pathological specimens from all areas of the world, which is unequaled in this country.

The Museum of Hygiene, National Museum, Smithsonian Institution, Botanic Gardens, and the various collections of the Department of Agriculture all afford opportunity for study of materials of special interest in various areas of Medicine and its allied sciences.

The Hospital offers 24 *mixed*

internships, as classified by the American Medical Association and National Intern Matching Program, 13 with medicine as the major component and 11 with a major in surgery.

A total of 55 residencies, approved by the Council on Medical Education and Hospitals of the American Medical Association, are offered in anesthesiology, cardiac diseases, internal medicine, neurologic surgery, neurology, obstetrics-gynecology, pathology, pediatrics, physical medicine, plastic surgery, psychiatry, roentgenology, surgery, and thoracic surgery. Residency programs are of from one to four years depending upon the service. Appointments are for one year subject to renewal. In several fields there are affiliations with local and government hospitals.

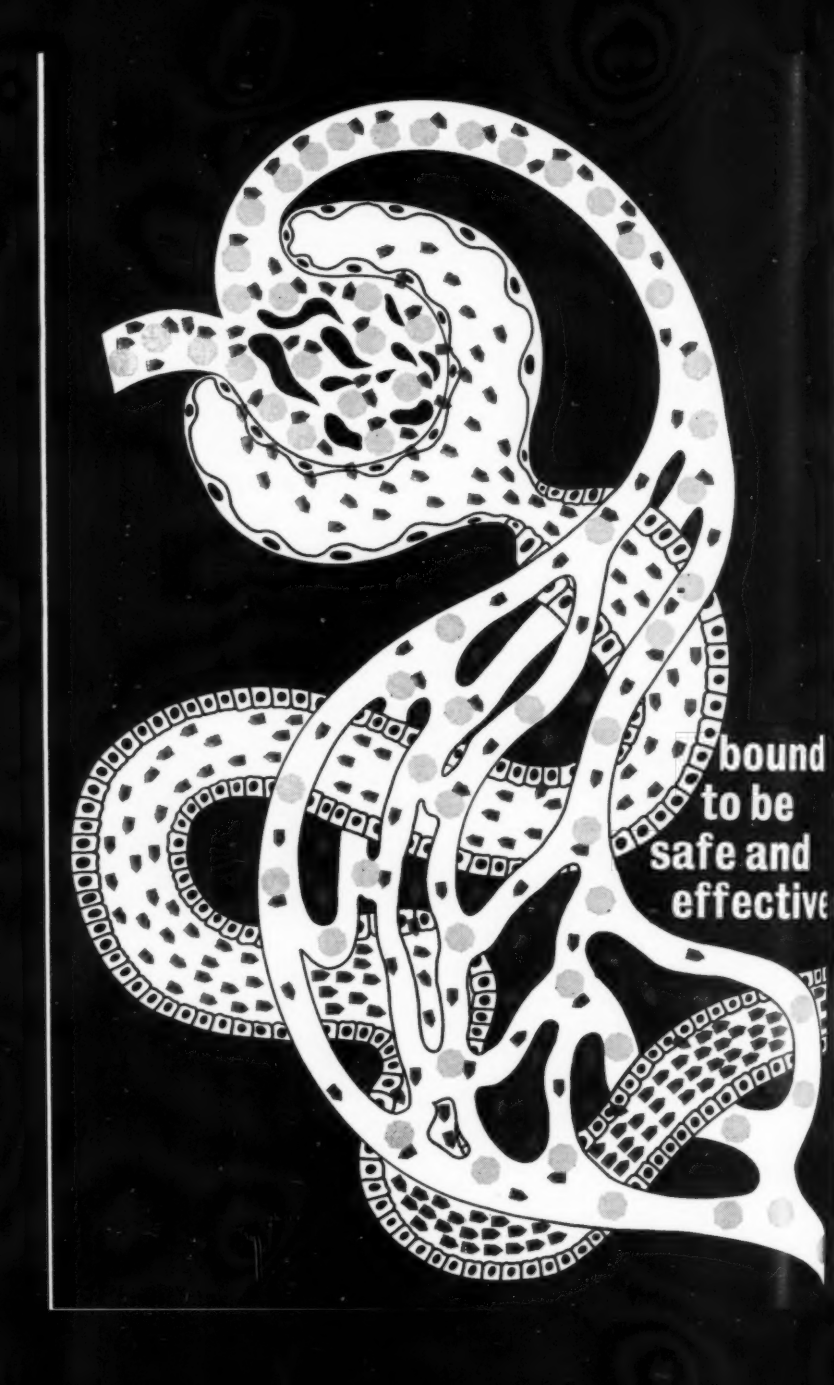
Fellowships of one or two years are available in anesthesiology, cardiology, chest diseases, infectious diseases, outpatient service, physical medicine, rheumatic diseases, surgery, and thoracic surgery.

The Hospital is approved for the training of veterans under Public Law 550, and is also under the Department of State's Exchange-Visitor Program. Applicants from foreign medical schools must be certified by the Educational Council for Foreign Medical Graduates.

Anesthesiology

A two-year residency is offered in anesthesiology. Approved for 14 residents by the American Board of Anesthesiology, the program includes clinical instruction, regularly scheduled seminars, and research facilities. There are six full-time anesthesi-

A section of the busy outpatient examining room facilities at GW Hospital.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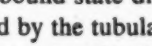
in any urinary tract infection: "it is the kidney which is the most important consideration"[1]. . . "infections limited to the lower urinary tract are comparatively rare"[2]

In the bloodstream, free FURADANTIN and FURADANTIN bound to plasma proteins are in equilibrium  Free FURADANTIN passes readily through the glomerular filter. Protein-bound FURADANTIN, however, is not filtered by the glomerulus and reaches the peritubular capillaries. Here equilibrium is restored, and the FURADANTIN released from its bound state diffuses through the interstitial spaces and is secreted by the tubular cells. Exacting studies "suggest a three-component system for the renal transport of nitrofurantoin. That is, this nitrofuran appears to be filtered at the glomeruli and both secreted and reabsorbed by the tubules."[3]

Furadantin safeguards the kidney via a "three-component system of renal transport"[3]... insuring continuous, intimate contact with functioning renal tissue

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"...may be given for extended periods of time without development of side effects or of drug-resistant mutants."[4]

"...was given continuously and safely for as long as three years."[5]

SUPPLIED: Tablets, 50 and 100 mg.; Oral Suspension, 25 mg. per 5 cc. tsp.

*Conservative estimate based on clinical use since introduction.

REFERENCES: 1. Thompson, I. M.: Family Physician, Chicago 9:14, 1959. 2. Campbell, M. F.: Mod. Med. 24:85, 1956. 3. Paul, M. F., et al.: Am. J. Physiol. 197:580, 1959. 4. Johnson, S. H., III, and Marshall, M., Jr.: J. Urol., Balt. 82:162, 1959. 5. Lippman, R. W., et al.: J. Urol., Balt. 80:77, 1958.

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Residents (2nd year)	$235
Senior Residents (3rd year)	$260
Chief Residents (4th year)	$285

Residents receive appointments as Assistants in the School of Medicine. House officers are also entitled to two weeks vacation with pay.

Members of the house staff provide their own meals and quarters except for "on call" sleeping accommodations in the Hospital. Meals may be purchased at cost in the Hospital cafeteria.

Departmental offices or the administrator's office are often able to assist in locating housing. Temporary accommodations on a monthly basis usually are available for single persons at nearby University dormitories during June, July, and August.

Uniforms must be furnished by the physician: white trousers and jackets for interns and long white coats for residents. The laundering of uniforms is provided by the Hospital.

Residents and interns are enrolled in the local Blue Cross plan, and they and their immediate dependents (if enrolled) are not required to pay beyond Blue Cross benefits for any confinement in semi-private accommodations covered by the program. Malpractice insurance is not required of house officers, but is strongly recommended.

Employment opportunities in Washington are generally good. The University's personnel office assists wives of house officers in finding employment.

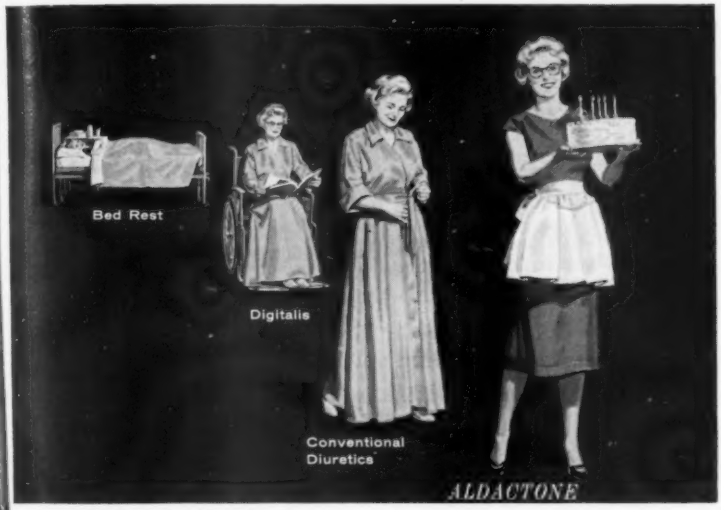
---

ologists to supervise the training. All types of surgery are performed in the Hospital, and approximately 12,000 anesthetics are administered each year.

Seminars are held twice weekly, one being devoted entirely to basic sciences, the other to case management, journal reviews, and reports of anesthesia meetings. In addition, a critique hour is held once a week. Clinical research is encouraged and ample opportunity is afforded for it.

Medicine

The medical service at the Hospital includes 120 beds. Medical admissions average more than 4,000 each year, and 16,000 patient visits are made to medical outpatient clinics. The Hospital is affiliated for training purposes with the University Division of the 1700-bed District



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A typical case history illustrates the extent to which Aldactone can supplement and advance established medical resources for treating edema and ascites.

Report of a Case*

Mrs. L. S., 44, was admitted to the hospital on April 17, 1959, with massive ascites, 3-plus edema of the legs and moderate pulmonary congestion. Three previous admissions had established that she had rheumatic heart disease with cardiac enlargement, atrial fibrillation and mixed valvular lesions.

She was placed on a regimen of bed rest, digitalis and 0.5 Gm. of sodium daily. On treatment which included mercurials parenterally, hydrochlorothiazide, KCl, NH_4Cl, aminophylline, prednisone, acetazolamide and lysine monochloride the patient lost 15 pounds, but her ascites did not diminish noticeably and her weight remained within the range of 130 to 135 pounds from May 1 to May 30.

On May 30, 100 mg. of Aldactone q.i.d. was added to her regimen. Progressive and continuous diuresis followed. Weight dropped from 130 to 107 pounds, her normal weight. The patient was discharged on June 14 completely free from ascites and peripheral edema.

She was maintained on digitalis and hydrochlorothiazide and had no further weight gain until December 1959. She was then given 400 mg. of Aldactone daily for five days and again achieved dry weight, which was maintained as of February 1960.

Aldactone is supplied as compression-coated yellow tablets of 100 mg.

*Klass, A.: Cur. Therap. Res. *2*:322 (July) 1960.

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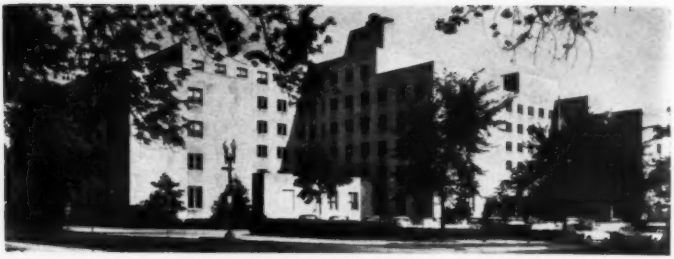
Research in the Service of Medicine



View of George Washington University Hospital.

of Columbia General Hospital.

The 13 interns are provided a broad experience in medicine, with eight months' service on medical wards, two months on surgery, and two months on pediatrics. Medical subspecialties are included in the medical ward service.

Formal training includes weekly medical conferences, grand rounds, clinical pathological conference, lecture on diagnostic methods and therapeutic reviews, and ward rounds twice each week by senior attending physicians. Rounds and conferences are regularly held in nearly all subspecialty fields.

The department has a one- to four-year program of residency approved by the American Board of Internal Medicine, with eight assistant residents and one chief resident. In addition there are approved facilities for residency training at the University Division of the D. C. General Hospital and Mount Alto Veterans Administration Hospital. The Veterans Administration Hospital program is under the training guidance of a Dean's Committee.

The training program is based on a rotation schedule of eight months in the medical units, two months in the cardiac service, and two months in outpatient clinic service. The resident is responsible for supervision and instruction of the house staff and medical students assigned to his service.

Residents may participate in research programs in progress in most of the subspecialty areas.

Neurological surgery

A four-year residency program in neurological surgery approved by the American Board of Neurological Surgery, is offered. After one year as a junior resident at the University Hospital, the

Resident surgeons at work in one of the hospital ORs.

resident takes a six months' fellowship in neuropathology at the Armed Forces Institute of Pathology and a six months' residency in pediatric neurology and neurological surgery at Children's Hospital. During his third year, he holds a senior residency at the University Hospital, and in the fourth year serves as chief resident in neurosurgery at the District of Columbia General Hospital.

Twenty-six beds at University Hospital are assigned to the department. During a typical year there are approximately 500 admissions, 200 major operations, and 300 diagnostic procedures.

The resident, appointed on a yearly basis, is first assistant at operations and performs encephalograms, myelograms, and arteriograms. As he shows ability he is given greater responsibility and allowed to operate upon staff patients, assisted by a member of the attending staff.

In his fourth year, at D. C. General Hospital, the resident's responsibility is greatly increased. He operates upon the majority of the neurosurgical patients under supervision of the visiting staff. The service is shared with Georgetown University, and fa-

cilities include 50 beds assigned to neurology and neurosurgery. During a teaching year over 500 patients are admitted; 1300 are seen in the outpatient department; approximately 170 major operations are performed, and 300 diagnostic procedures are undertaken.

Residents in both hospitals participate in all departmental activities, including staff conferences, ward rounds, teaching of medical students, and the care of hospital patients and outpatients.

Neurology

A three-year board-approved residency is offered in neurology. One year is spent at the University Hospital, and includes work in the outpatient department in the general neurology clinic, convulsive disorder clinic, and parkinsonism clinic. Inpatients are in one 26-bed wing for neurology and neurosurgery.

Clinical electroencephalography and brain cutting sessions, conferences, and basic science neurology lectures are regularly scheduled. Neuro-roentgenology teaching sessions are held bimonthly. A pediatric neurology clinic is held weekly at Children's Hospital.

The first year and the final six months of the program are spent at D. C. General Hospital, where 50 beds for neurology and neurosurgery are provided, supervised by the full-time chief of neurology and neurology staff of both George Washington and Georgetown University medical schools.

Six months of the program may be spent at Children's Hospital, the Armed Forces Institute of Pathology, or St. Elizabeth's Hospital. A research laboratory is available for the advanced resident.

Ob-Gyn

An approved, three-year residency program is offered for a staff of six residents. Usually, the second year of the program is spent in the Ob-Gyn department of D. C. General Hospital.

Approximately 1800 gynecological patients are treated and 3800 deliveries are conducted annually in the University Hospital. Through use of multiple nurseries located near mothers' rooms, the Hospital's third floor has been constructed to serve as a family-centered maternity department for the care of mothers and their newborn infants.

Residents participate in all phases of the department's activities: outpatient and inpatient services, tumor clinics, student

Resident checks data in research and testing lab of University Cancer Clinic.

and staff conferences, ward rounds, weekly pathology seminars, operating and delivery rooms. Supervision is by the University full-time and clinical staff.

Physical medicine

A three-year, board approved residency or fellowship is offered in PM and R. A one, two, or three-year program is available and applicants may request another appointment at the end of one year. In addition to the University Hospital's facilities, those of Mount Alto Veterans Administration Hospital are available. Clinical supervision and training includes all phases of diagnostic procedures, patient management, and care of both outpatients and hospitalized patients, numbering between 15,000 and 16,000 annually. A special rehabilitation program for severely disabled hospitalized patients is part of the clinical responsibility. Residents and fellows may participate in research in rheumatology under the supervision of the medical service. Clinical teaching experience includes both lectures and demonstrations to physical therapists and medical students.

Pathology

A three-year program in pathologic anatomy and a four-year combined program in pathologic anatomy and clinical pathology, both approved by the American Board of Pathology, are offered. Appointments are made on a yearly basis, subject to renewal. There is an authorized complement of four residents; in addition, residents from the departments of Surgery and Radiology are assigned for six months training in pathologic anatomy.

In the four-year program, most of the first two years are spent in pathologic anatomy and most of the last two in clinical pathology. In the three-year pro-

gram, the time is divided between surgical anatomy, postmortem pathology, cancer cytology, and bone marrow examinations.

Each year about 300 autopsies are performed, representing about 75% of the deaths in the hospital. Nearly 8,000 surgical specimens are examined annually, including a large number of biopsies. All cases are carefully coded and indexed, readily available for reference or research.

Departmental conferences are conducted by the senior members of the resident staff. They provide a regular review of current material and of special teaching collections. Other teaching conferences are conducted jointly with surgery, pediatrics and medicine. Four qualified pathologists devote full time to the activities of the Department.

Radiology

A three-year residency program, approved by the American Board of Radiology, is offered; six months of the program are spent in the therapy section of the radiology department of Walter Reed Army Hospital. An additional six months of radiation therapy are provided at University Hospital, where patients from both the Hospital and the cancer clinic are treated.

Six months of training are divided between the pathology department at the Hospital and instruction in the use of radioactive isotopes at nearby United States Naval Hospital, Bethesda, Maryland.

Annually, the radiology department has approximately 24,000 roentgen examinations and 7,000 radiation treatments.

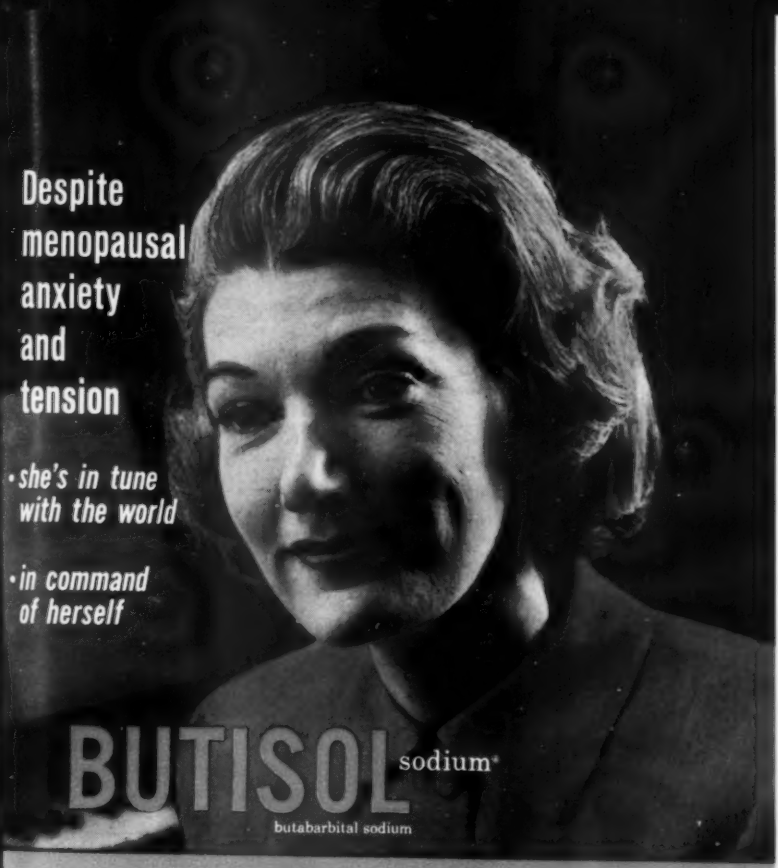
Plastic surgery

Board approved for a three-year residency, the plastic surgery program allows for either a two or three year period, according to individual needs.

The resident has the opportunity to examine all private patients preoperatively, to help in postoperative care, and to be first assistant in the operating room. He is directly responsible for all ward patients on the service.

Training includes head and neck cancer surgery in conjunction with the University's cancer clinic, plus maxillofacial, cosmetic, reconstructive, and pediatric plastic surgery.

Special time is devoted to instruction in pathology, anatomy, and radiology as related to plastic surgery. Research facilities are available in the animal labo-



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* Batterman, R. C., Grossman, A. J., Lotter, P., and Mouratoff, G. J.: Clinical Re-evaluation of Daytime Sedatives. Postgrad. Med. 26:502 (Oct.) 1959.

GEORGE WASHINGTON UNIVERSITY HOSPITAL SERVICES

Service	Chief
Anesthesiology	CHARLES S. COAKLEY
Medicine	THOMAS MCPHERSON BROWN
Allergy	HALLA BROWN
Cardiology	JOHN EVANS
Dermatology	HARRY F. ANDERSON
Gastroenterology	THOMAS SAPPINGTON
Infectious Diseases	MONROE ROMANSKY
Internal Medicine	CHARLES HALLEY
Metabolic Diseases	LOUIS K. ALPERT
Pulmonary Diseases	JAMES FEFFER
Neurology and Neurological Surgery	JAMES WATTS
Obstetrics and Gynecology	ROBERT H. BARTER
Ophthalmology	RONALD A. COX
Pathology and Clinical Pathology	THOMAS A. PEERY
Pediatrics	WILLIAM A. HOWARD
Physical Medicine and Rehabilitation	CHARLES S. WISE
Psychiatry	LEON YOCHELSON
Radiology	WILLIAM W. STANBRO
Surgery	BRIAN BLADES
General Surgery	BRIAN BLADES
Oral Surgery	KARL HAYDEN WOOD
Orthopedics	JOHN P. ADAMS
Otorhinolaryngology	JAMES J. MCFARLAND, JR.
Plastic Surgery	GORDON LETTERMAN
Urology	LEON R. CULBERTSON

ratory and in the pathology department.

Psychiatry

A two-year residency program with board approval is offered for two residents. Applicants may request one or two-year appointments, or may request continuation of appointment at the end of one year. Arrangements may be made to attend conferences at St. Elizabeth's Hospital or courses at the Washington School of Psychiatry or the Washington Psychoanalytic Institute.

Training and experience in the department includes, under super-

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vision, the administration of a 25-bed ward; two mornings a week in the psychiatric outpatient clinic; consultations as requested by other services in the Hospital; and participation in the teaching program for senior medical students. Teaching conferences are held regularly, with stress upon dynamic understanding of patient's problems and brief psychotherapy from an analytically - oriented point of view.

The resident also has opportunity to observe the varied treatment programs of private practicing psychiatrists who utilize such techniques as psychoanalysis, psychotherapy, insulin, electro-convulsive therapy, and brain surgery.

Surgery

Eleven interns are assigned to the surgical service for eight months; they assist at operations and perform some operations under supervision. Two months are spent on general medicine and two months on obstetrics-gynecology.

Interns who serve on the University surgical service have priority for positions as surgical residents on the Hospital or affiliated hospital staffs.

The four-year residency program is board approved. There are 11 surgical residents who receive training at the University Hospital, the D. C. General Hospital, and Mount Alto and Newton D. Baker Veterans Administration Hospitals. Special training is given at the Surgical Research Laboratory and at Glenn Dale Tuberculosis Sanitorium.

At University Hospital, about 160 beds are devoted to surgery and surgical specialties, and about 7,500 patients are operated upon annually.

Four junior residents and six residents rotate through various services. They spend two months each on neurosurgery, gynecological surgery, combined urological and orthopedic surgery, and six months on general surgery.

The chief surgical resident is in charge of the surgical house staff of the Hospital during his final year of training. Two others are appointed chief resident in affiliated hospitals during the last year of training.

John Parks, M.D.

Guest Editorial

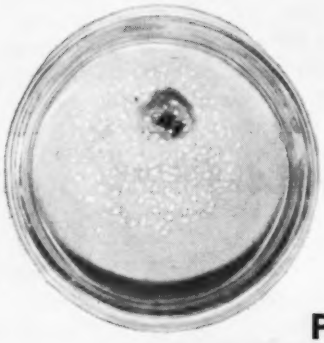
Making Emergency Room Decisions

Emergency facilities of hospitals throughout the United States have become more than accident wards. They now serve as important community health centers. The accident receiving ward of the past has been an effective area in which to learn practical medicine and surgery. With the increasing use of emergency services for more than casualties and acute illnesses there is opportunity to improve the purpose of these important units of our modern hospitals as educational and service centers.

Properly planned and adequately directed emergency departments can contribute immensely to the clinical knowledge of a resident, intern, or medical student. Judgments have to be made with a time element unlike that of office or hospital practice. Emergency decisions require rapid evaluation of the patient's situation and ready recall of past experience which may be helpful to his problem. Quick and accurate decision, application of emergency aid measures, the use of laboratory facilities including diagnostic roentgenography, reference to texts or to manuals of procedure, and early consultation frequently mean the difference between life and death—between quick recovery or prolonged illness.

People from all walks of life arrive at hospital emergency

No. 5 in a series on Abbott specialties



Potassium Penicillin V versus semi-synthetic penicillin

Recent clinical evidence sheds new light on some important questions...

Q. Which of the two oral penicillins provides greater antibacterial activity?

In a follow-up study[1] of oral penicillins, McCarthy and Finland compared the antibacterial activity of potassium penicillin V and semi-synthetic penicillin. They said: "Penicillin V provided greater activity than phenethicillin [semi-synthetic penicillin] against the streptococcus and pneumococcus, at least equivalent activity against the staphylococcus and sarcina in the serum and the same or greater activity in the urine . . ."

In another study[2], Griffith found that penicillin V not only produced peak levels of serum antibacterial activity faster, but produced values almost half again as high as those obtained with semi-synthetic penicillin.

A direct laboratory comparison[3] by Abbott scientists revealed a measurable difference in activity, milligram for milligram, between the two penicillins *in vitro*. Against four pathogenic strains (staphylococcus, streptococcus, pneumococcus, and corynebacterium species), potassium penicillin V exhibited from two to eight times the antibacterial activity of semi-synthetic penicillin.

Q. How valid are blood levels as a basis for comparison?

In comment on the two penicillins, McCarthy and Finland state[1]: "Thus, although the claim of better absorption and excretion

and higher serum level of phenethicillin may be partly correct, strictly speaking, this is true in a very restricted sense and is therapeutically meaningless. Indeed the claim is misleading since it clearly implies greater antibacterial and presumably curative activity, which, in fact, the drug does not possess . . ."

Q. Are there useful differences in resistance to penicillinase?

In another recent report[4], Geronimus commented: "Very large concentrations [of semi-synthetic penicillin] . . . were required to inhibit even so-called moderately penicillin-resistant staphylococci when populations were employed that approached those found *in vivo*. Inferences regarding the possible effectiveness of phenethicillin in infections by penicillinase-producing staphylococci drawn by others from experiments with relatively minute inocula were found to be unwarranted."

McCarthy et al.[5] reached a similar conclusion: "Both of these penicillins [potassium penicillin V and phenethicillin] are qualitatively similar to penicillin G in their susceptibility to penicillinase produced by *Staphylococcus aureus*."

At Abbott, investigators studying the same subject[3] found that the rate of destruction of all three penicillins was so great that any differences were of no therapeutic significance.

Q. How does the safety of oral penicillins compare?

While surveys[6] have established that oral penicillin produces fewer and less severe reactions than does injectable penicillin, to date no clinical studies have produced any evidence that one oral form is less allergenic than another.

Q. What are the benefits of Compocillin-VK?

Compocillin-VK is Abbott's potassium penicillin V. It offers early, high concentrations of serum antibacterial activity against penicillin-sensitive organisms. Following appropriate doses, initial activity levels are higher than those obtained with intramuscular penicillin G. Available in easy-to-take forms for any age: tiny Filmtab® tablets, 125 mg. and 250 mg.; or as granules for tasty cherry-flavored Oral Solution.

COMPOCILLIN®-VK

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(POTASSIUM PENICILLIN V)

1. McCarthy, C. G., and Finland, M., New England J. Med., 263:315, Aug. 18, 1960. 2. Griffith, R. S., Antibiot. Med. & Clin. Therapy, 7:129, Feb., 1960. 3. Laboratory Records, Microbiology Dept., Abbott. 4. Geronimus, L. H., New England J. Med., 263:315, Aug. 18, 1960. 5. McCarthy, C. G., Hirsch, H. A., and Finland, M., Proc. Soc. Exper. Biol. Med., 103-177, Jan., 1960. 6. Welch, H., Lewis, C. N., Weinstein, H. I., Boeckman, B. B., Antibiotics Annual, 1957-58, p. 296.

JOHN PARKS, M.D.
Dean of the
School of Medicine
Medical Director,
University Hospital,
George Washington
University.

rooms because they are hurt, frightened, or unconscious. Anyone can have an accident or an acute illness. A teen-ager with a crushed chest, a banker with coronary heart disease, a badly burned toddler, a burglar bleeding from gunshot wounds, a newborn delivered on arrival, a grandmother with a broken hip, a fever producing, pox-like furunculosis in a patient with undiagnosed diabetes are examples of real emergencies. They challenge the diagnostic ability and therapeutic wisdom of the emergency room physician. But accidents and acute illnesses represent only about half the patients currently seen in hospital emergency facilities. After dark and on week ends, and during holidays, an increasing percentage of the population tend to turn to the nearest hospital for relief of bodily discomfort or mental anguish. Consequently community hospital emergency facilities are crowded with a cross section of the citizenry seeking medical or surgical aid for assorted ills. No appointment is needed. Physicians and nurses are always on duty. For many areas hospital emergency departments have become after hour referral centers where practicing physicians send or attend their patients.

There is no area of a hospital where professional competence and administrative efficiency are more acutely judged by the public than in the emergency unit. Fears and uncertainties accompany the patient on his unscheduled trip to the hospital. When delay, indifference or inhospitalities are encountered, tensions are increased and hostility may develop. If all emergency room personnel respond quickly and kindly to the needs of the individual patient, apprehensions are readily allayed. Regardless of the patient's illness

the emergency room physician is first a Doctor and then possibly a specialist. Simple remedies and indicated relief of pain are appreciated. When diagnosis is in doubt, observation is in order. Time tells as well as heals.

Head, eye, facial and internal injuries often require the opinion and technical abilities of a specialist, but the interim between calling the consultant and his arrival remain an important period of responsibility of the house officer or physician who first attends the patient in the emergency department.

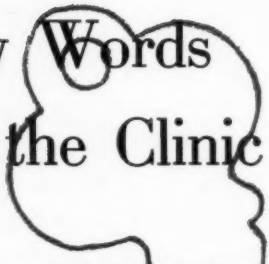
After the diagnosis has been made and treatment has been given, the emergency room physician has two additional responsibilities. An easily identifiable, accurate record containing proper time relationships gives medical authenticity to the decisions which were made. Finally a responsibility which may be difficult to fulfill is that of checking the accuracy of the diagnosis and treatment. The house physician who asks his emergency room patient to call him if symptoms fail to improve or who reviews the record and visits the hospitalized patient will be an appreciated as well as better informed physician.

PUBLIC SERVICE

"From a lifetime of Federal service, I have become much aware that the conventional rewards from productive labor are not usually received in public service; but there is a reward from public service not achievable in any other enterprise, and that is the abiding satisfaction of knowing that you have served your countrymen faithfully and well and that you have done your honest best to build a stronger and better nation for our citizens today and for generations to come."

DWIGHT D. EISENHOWER

Key Words for the Clinic



In many areas of the U.S., foreign-born comprise a large part of the total population. Hospital physicians when examining and treating foreign-born patients, many of whom speak little or no English, often encounter serious difficulty in communicating even the most routine request or direction. The result is not only frustrating for doctor and patient, but a misunderstanding can endanger the proper care of the patient. To ease the patient's anxiety and assist the physician in conducting an accurate examination and history-taking, RESIDENT PHYSICIAN has prepared this guide to commonly-used medical directions, questions and answers, with translations into various foreign languages.

Using the language guide

Keep this language guide open in front of you while attending your patient. If a word doesn't seem to be understood, repeat it a few times slowly; vary the pronunciation slightly until the patient indicates his comprehension. The fact that you are trying to speak to him in his native language will cause your patient to be more relaxed and responsive. Grateful for your effort, he will be anxious to do everything he can to comprehend and convey accurate, precise information.

The Aged

–and a natural way to meet their special nutrition needs with fresh-flavor, economical Carnation Instant.

Finicky appetites, dental problems, food costs—one or more often play a part in contributing to poor diet for the elderly.

A pleasant *natural* way to help improve their nutritional status is the excellent new food—*new Carnation Instant Nonfat Dry Milk mixed 25% over-strength.*

One-third cup extra crystals per liquid quart when mixing provides 25% more calcium, protein, and B-vitamins than ordinary nonfat milk. Because your patients can add this additional amount, they get *needed* nutrients—*without* excessive calories. And the richer, more delicious flavor of nonfat milk mixed over-strength is a *natural* way to *extra* nutrition they'll enjoy. Costs them only 12¢ a quart.

ANOTHER QUALITY PRODUCT OF CARNATION COMPANY, LOS ANGELES 36, CALIFORNIA

FOR EXAMINATION OF

German-speaking Patients

Basic rules of pronunciation

Although the correct spelling of all German nouns requires that the first letters be capitalized, we have eliminated the capital letters with the thought that less confusion will result for the American resident when using this guide to pronunciation.

In general, German words are pronounced very much like Latin words.

a or aa — ah, father	c before e, i, or y — ts
e or ee — ay or eh	c in other cases — k
i or y — ee	ch — k
o or oo — oh	g — g in 'go'
u — oo	h is sounded, but silent after a vowel
ä — ay	j — y in 'yes'
ö — er in 'her'	qu — kv
ü — ee	sch — sh
äu or eu — oy	sp, st — shp, sht at the beginning of a word
au — ow in 'how'	v — f
ai or ei — y in 'my'	w — v
ie — ee	

Courtesy phrases

NOTE: Normal courtesy requires the use of the name after the title Herr (Mr.), Frau (Mrs.) and Fräulein (Miss), if it is known. If the name is not known, the title is best left out.

Good morning	Guten morgen
Good afternoon	Guten tag
Good night	Gute nacht
Please	Bitte
Please sit down	Bitte setzen sie sich
How are you	Wie geht es Ihnen

25 feet!

Our picture shows a new British TRIUMPH/Herald turning completely around in only 25 feet. This is *unusual*—even for a smaller car. (A typical "compact" needs 39 feet, for instance.) How does the TRIUMPH do it? Its wheels turn farther than any other car's. It is so maneuverable, you can park it with only 18 inches leeway.

This is only one of the TRIUMPH's innovations. It has so many, experts put it "3 full engineering years ahead" of any other economy car—imported or domestic. *Resident Physician* picked it as the car with the most wanted features for the hospital staff physician. Here are 3:

(1) The TRIUMPH never needs an ordinary grease job. Only 4 parts ever need greasing and then only once every 6,000-12,000 miles. **(2)** Each wheel is independently suspended. And the TRIUMPH is stabilized with a torsion bar. It stays level on the roughest roads. (3) The TRIUMPH has so many new safety features—e.g. a telescoping steering wheel, extra brake lining area, 93% visibility—that one major British firm lowered the insurance rates 12½%.

It costs* slightly less than a "compact." But engineering alone makes it worth its weight in gold. And it comes fully equipped. The only extras are white walls and a radio.

The TRIUMPH/Herald comes in 3 models: Sedan, Sports Coupe and Convertible. See them today at your local TRIUMPH dealer's. He's listed in the Yellow Pages.

TRIUMPH

***Sedan—$1849; Sports Coupe—$2149; Convertible—$2229,** POE, plus state and/or local taxes. Standard-Triumph Motor Co., Inc., Dept. RH-21, 1745 B'way, N.Y. 19.

Very well, thanks	Danke, sehr wohl
Do you understand	Verstehen sie
I understand (do not)	Ich verstehe (nicht)
Excuse me	Entschuldigen sie
Pardon me	Verzeihen sie
Very good	Sehr gut
Today	Heute
Tomorrow	Morgen
Yesterday	Gestern

Anatomical terms

head—der kopf	chest—die brust
eye(s)—das (die) auge (n)	lungs—die lunge
ear(s)—das (die) ohr (en)	shoulders—die schultern
nose—die nase	tongue—die zunge
mouth—der mund	throat—der hals
teeth—die zähne	finger—der finger
neck—das genick	leg(s)—das(die) bein(e)
heart—das herz	feet—die füsse
stomach—der magen	hands—die händs
bladder—die blase	rectum—der mastdarm
back—der rücken	buttock—das gesäss
arm(s)—der (die) arm(e)	womb—die gebärmutter

General questions

do you feel sick	fuehlen sie sich krank
do you have pain	haben sie schmerzen
— much pain	— heftige schmerzen
— mild pain	— milde schmerzen
where	wo
here	hier
when	wann
how many years	wie viele jahre
how many days	wie viele tage
how many hours	wie viele stunden
how many times	wie oft
where were you born	wo sind sie geboren
how old are you	wie alt sind sie

in emergencies

INJECTION

Hydrocortone® PHOSPHATE

HYDROCORTISONE 21-PHOSPHATE

in the patient in 30 seconds · in the plasma in 5 minutes

1. No dilution 2. No mixing 3. No waiting . . . in stable solution ready-to-inject with small-bore needle.

. . . Plasma steroid levels are evident within 5 minutes after injection by any route . . . intravenous, intramuscular or subcutaneous.

After intramuscular injection . . .

higher initial steroid plasma levels than with hydrocortisone hemisuccinate.

After intramuscular or intravenous injection . . .

more prolonged steroid levels than with hydrocortisone hemisuccinate.

DOSAGE: The usual dose of Injection HYDROCORTONE Phosphate in emergency situations is 100 to 250 mg. depending upon the severity of the condition. For additional information see package circular.

SUPPLIED: In 2-cc. vials, each cc. containing 50 mg. HYDROCORTONE (as hydrocortisone 21-phosphate, disodium salt). Also available—Injection HYDELTRASOL® (prednisolone 21-phosphate) in 2-cc. and 5-cc. vials, each cc. containing 20 mg. of prednisolone 21-phosphate as the disodium salt. Injection DECADRON® Phosphate in 5-cc. vials, each cc. containing 4 mg. dexamethasone 21-phosphate as the disodium salt.

Hydrocortone, Hydeltrasol and Decadron are trademarks of Merck & Co., Inc.

Additional information is available to physicians on request.

MSD MERCK SHARP & DOHME, Division of Merck & Co., Inc., West Point, Pa.

Directions to patients

do as I do	machen sie mir nach
relax	entspannen sie
relax more	entspannen sie mehr
open your mouth	öffnen sie den mund
open your eyes	öffnen sie die augen
breathe deeply	atmen sie tief
breathe through your mouth	atmen sie durch den mund
hold your breath	halten sie den atem an
push	drücken sie
cough	husten sie
please don't move	bitte, halten sie still

Diseases—Krankheiten

measles	masern
scarlet fever	scharlach
chicken pox	windpocken
small pox	echte pocken
pneumonia	lungenentzündung
typhoid fever	typhus
enteritis	darmkatarrh
U. R. I.	erkältung

Systemic inquiry

Head	
trauma	verletzung
unconscious	bewusstlos
did you faint	waren sie ohnmächtig
are you dizzy	sind sie schwindlig
headache	kopfschmerzen
Eyes	
sight	sehkraft
clear vision	klares sehen
near	kurzsichtig
far	weitsichtig
Ears	
he is deaf	er ist taub
noise in the ears	geräusch in den ohren

...does she know **you** can help her?

Many patients are unaware that their physician is the best source of contraceptive advice. Your prescription for Delfen or Preceptin assures her the simplest yet most effective contraceptive protection available. Accurate tests* for spermicidal potency, as well as years of clinical use, demonstrate that ORTHO contraceptive products are instantaneously spermicidal. The choice between Delfen and Preceptin is one of individual esthetic preference.

Delfen® vaginal cream **Preceptin®** vaginal gel

PRESCRIBED WITH CONFIDENCE FOR SIMPLE, EFFECTIVE CONTRACEPTION

*The spermicidal potency of all ORTHO products is controlled by the **Titration Test** and the **Sander-Cramer Test,** which more closely duplicate vaginal conditions during coitus than other tests.

Ortho

Nose	
coryza (head cold)	schnupfen
did you have nosebleed	hatten sie nasenbluten
Throat	
do you have frequent sore-throat	haben sie oft halsschmerzen

Gastrointestinal

do you have a good appetite	haben sie guten appetit
do you have a poor appetite	haben sie schlechten appetit
are you nauseated	haben sie brechreiz
were you nauseated	hatten sie brechreiz
do you vomit	brechen sie
do you have diarrhea	haben sie durchfall
are you constipated	sind sie verstopft
did you have a B.M. today	hatten sie heute stuhl
feces	stuhl
black	schwarz
white	weiss
yellow	gelb
brown	braun
bloody	blutig
do you have cramps	haben sie krämpfe
after meals	nach dem essen
before meals	vor dem essen
did you take a laxative	haben sie ein abfuehrmittel genommen
did you take castor oil	haben sie rizinusoel genommen

Genitourinary

urine	urin
do you get up at night to urinate	müssen sie während de nacht urinieren
does it burn	brennt es
chills	haben sie schuettelfrost
fever	haben sie fieber

RESIDENT PHYSICIAN

Sets the Pace...

. . . Under the directorship of your editor, Perrin H. Long, M.D., your journal's traditional leadership in editorial standards provides you with authoritative and original articles designed to be of practical value. RESIDENT PHYSICIAN recognizes the responsibility of leadership and will continue to bring you editorial "Firsts."

THE PUBLISHER

Cardio-respiratory

do you tire easily	ermüden sie leicht
are you short of breath	sind sie kurzatmig
does your heart beat fast	haben sie herzklopfen
do your feet swell	haben sie geschwollene füsse
do you have a pain in the chest	haben sie schmerzen in der brust
—sharp pain	—scharfe schmerzen
—dull pain	—dumpfe schmerzen
—when you breathe	—beim atmen
do you cough	husten sie
do you spit	spucken sie
sputum	haben sie auswurf
bloody sputum	blutigen auswurf
have you lost weight	haben sie abgenommen
does someone in your family have a cough	hustet jemand in ihrer familie

Obstetrics and gynecology

at what age did you begin to menstruate	wie alt waren sie als sie die erste menstruation hatten
how many days do you flow	wie viele tage bluten sie
1 to 10	eins, zwei, drei, vier, fuenf, sechs, sieben, acht, neun, zehn
do you have a discharge	haben sie einen ausfluss
when was your last menstrual period	wann hatten sie ihre letzte menstruation
do you have pain with your menstruation	haben sie schmerzen bei der menstruation
are you pregnant	sind sie schwanger
how many times have you been pregnant	wie oft waren sie schwanger
how many children have you had	wie viel kinder hatten sie
how much did the largest weigh at birth	wie viel hat das schwerste bei der geburt gewogen
what was the duration of labor	wie lange hatten sie wehen

did you have trouble with the child's delivery	war es eine schwere geburt

Pediatrics

how are the child's stools	wie ist der stühl des stuhl
—constipated	—verstopft
—diarrhea	—durchfall
—how many a day	—wie viele im tag
how is the child's appetite	wie ist der appetit des kindes
any vomiting	bricht es
does the face turn blue	wird es blau im gesicht
does the child seem tired	erscheint das kind müde
does it hurt	tut es weh
it won't hurt	es wird nicht weh tun
it will be finished in a minute	es wird gleich vorüber sein
do you want a piece of candy	willst du ein zuckerl
did you take the temperature	haben sie das kind gemessen
what was the temperature	wie hoch war die temperatur
what a big, handsome boy	so ein schöner grosser bube
what a beautiful little girl	so ein schönes mädel
little one or baby	kleines kind *or* baby
good	gut

NOTE: When talking to an adult use the word *Sie* for *you;* when talking to a child use the word *du* for *you.*

How Are Your Public Relations?

Maintaining good public relations is a problem that faces all practicing physicians, says the author. And the public impression the doctor makes in his community can help — or hinder — his practice.

Harold J. Ashe

When public relations is mentioned, it is usually in connection with a large utility corporation or industrial titan. A physician, therefore, may conclude erroneously that public relations is a matter of no concern to him. Yet, every physician has public relations problems, whether they're recognized as such or not.

The physician lives in a goldfish bowl, so that virtually all his professional and non-professional acts affect his public relations—for good or ill. Some physicians seem to know instinctively what to do and what to refrain from doing to foster better public relations. But some do not have this instinctive approach. It is these doctors who should give serious thought to the problem.

Public relations should not be confused with publicity. First, the doctor should understand that public relations and publicity are not identical, although the latter may be an instrument for im-

Unless your practice is limited to bacteriology . . . or your patients are all in the upper income brackets . . . you have doubtless received complaints about the cost of the medication you prescribe.

what your patient gives...and gets

Some of these complaints can probably be dismissed lightly as coming from cranks, who would complain about your fee for a midnight house call to save the life of a dying child. Others, however, are made seriously by thoughtful patients and deserve an answer in kind. You know what the patient gets from his pharmacist because you have prescribed it. Do you also know that the average cost of a prescription is about $3.00? Only about one in 100 costs $10.00 or more, and 3 out of 5 of the prescriptions are under $3.00. These figures are based on retail prices. They include the manufacturer's research, development, and manufacturing costs and all distribution costs of the wholesale and the retail druggist. Only you and your patients can judge whether today's drugs at these prices represent a fair *quid pro quo,* an equitable balance between what is given and what is received.

This message is brought to you by 138 producers of prescription drugs as a service to the medical profession and in the same spirit, it is carried by this publication. For additional information, please write Pharmaceutical Manufacturers Association, 1411 K Street, N.W., Washington 5, D.C.

proving public relations. However, publicity is not synonymous with public relations. Conceivably, publicity may adversely affect public relations.

In a few words, public relations may be defined as a *planned* means by which an individual (or organization) seeks to create a better understanding of him (or it) in the public mind. It is designed to produce a maximum amount of good will and to keep ill will to a minimum.

New field

Public relations is responsive to public opinion, prejudices and predilections. Sometimes it bows to these situations; often it tries to overcome and offset them. Public relations has as its goal the strengthening of good will and the creation of favorable reactions. It may involve the abandonment of certain practices or attitudes which result in ill will.

Public relations as now understood is relatively new. It came into existence around World War I as an outgrowth of press agentry. The elder John D. Rockefeller was one of the first clients of a public relations counsel. The task was to "humanize" Rockefeller who, in some quarters at least, was not well regarded. To accomplish this, Rockefeller was constantly supplied with a pocketful of shiny dimes which he gave away to youngsters. Other devices were also used, but his "generosity with dimes" became a widely accepted characteristic of the man.

A classic example of bad public relations was the occasion of wealthy railroad owner, William H. Vanderbilt, is reported to have replied to a reporter's question: "The public be damned." Never having heard of public relations, the purported author of the remark did not bother to issue a denial or attempt to overcome its ill effects.

Maximum numbers

A physician who has established good public relations in his community has succeeded in favorably disposing a maximum number of people toward him and his practice. The confidence and respect in which he is held should encompass a larger group than his patients. In immediate terms such widespread approval may result in no increase in his practice. In the long run, however, it will be reflected in gross receipts.

Public relations for the individual goes to the core of one's reputation. A reputation may be

poor, though undeserved. A physician may be acquiring a negative reputation in some quarters simply because he is indifferent to public opinion, or because he fails to even recognize its existence.

A man's character has been defined as what a man truly is. His reputation is what others believe him to be. The two are not synonymous and may be poles apart. Many a rascal has had a fine reputation, at least until exposed, and many a person of unqualified integrity suffers from a reputation which is less than he deserves.

A person of bad repute, such as a community's ne'er-do-well, may not be able to do much about his reputation unless he changes his ways. *However, better public relations can help even those who are above reproach.*

Civic attitude

A physician's attitude toward his community has a marked bearing on public relations. If he shirks all civic responsibilities and avoids outside activities on the plea of being "too busy," he may be shunned by many opinion-shapers whose good will is invaluable.

A physician need not go overboard in civic activities or neglect his practice to perform innumerable civic chores. But his participation should be sufficient to "register" with that part of the public which notices such activities.

Professional competence is not enough where public relations is involved. Professional mannerisms and attitudes, as well as personal behavior and deportment, will loom large in public opinion and have an important bearing on public relations. The detached, impersonal professional attitude may be an asset in a downtown metropolitan office. But it may be a liability in a neighborhood or small town location.

A physician in the city who may not know his neighbors one block removed may find such tolerant indifference striking a discordant note in a small town where everyone knows everything there is to know about everyone else, *including a lot of things that aren't so.* He may be baffled and resentful of this unless he recognizes that much of it is friendly, harmless curiosity which is a characteristic of life in a smaller community.

So, the atmosphere of the office may need to be critically examined as a necessary concession to public opinion. Public rela-

tions, personal attitudes and behavior may need overhauling.

Many approaches

There are many ways in which physicians can improve their public relations and create a more favorable impression of themselves, both professionally and personally. They may make contributions to charities far in excess of their ability to do so. Having done this, they may assume they have discharged their civic obligations. Often, however, these contributions go unnoted. Some physicians find greater satisfaction in contributing their *time* to worthy charities and other laudable endeavors. Regardless of the purpose behind such participation, it results in good public relations.

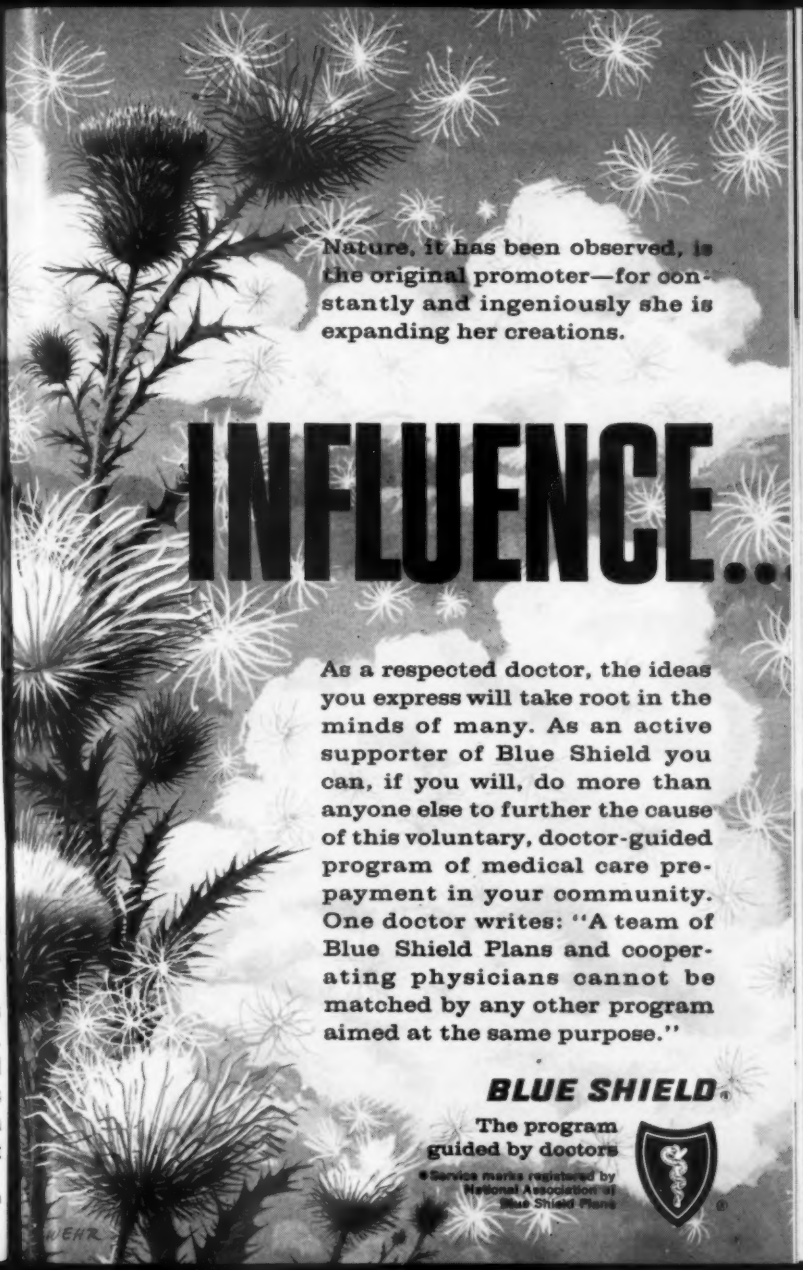
One physician interested in amateur dramatics but too shy to take an acting part serves as publicity director for a little theatre group.

Another physician, disturbed at the growth of juvenile delinquency, devotes considerable spare time working with a youth club.

There are countless outlets for spare-time activity which, while providing an outside interest, have great possibilities for improving the public relations of those so engaged, and putting them in a more favorable light. On this point, it may be worth underscoring that any activity entered into reluctantly and with an eye only to public relations will probably not be rewarding in any sense.

A physician has to learn to live with this fact: he cannot draw a fine line between his professional life and his life as a private citizen. And his family—whether they like it or not—share in this responsibility. Their conduct will reflect on the physician as a father and husband.

The doctor's wife must be as public relations minded as he is. She not only has occasion to deal with patients, but usually has broader community contacts than her husband. Her "loose talk" at


Nature, it has been observed, is the original promoter—for constantly and ingeniously she is expanding her creations.
INFLUENCE...
As a respected doctor, the ideas you express will take root in the minds of many. As an active supporter of Blue Shield you can, if you will, do more than anyone else to further the cause of this voluntary, doctor-guided program of medical care prepayment in your community. One doctor writes: "A team of Blue Shield Plans and cooperating physicians cannot be matched by any other program aimed at the same purpose."
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the bridge club can cost him patients. By the same token, her hard work as a Girl Scout leader can help her husband.

Humanizing influence

A cynic once defined public relations as "the art of making the public believe what aint so." This, long ago, may have had a critical grain of truth in it. Today, however, public relations is the art of making the public aware of the *best* that is in business and the professions, based on fact. It focuses attention on the human side of business and the professions.

Much of the ill will attaching to business and, to a degree, to the professions, is simply the end result of failure to do a good job, individually and collectively, in public relations.

Therefore, whether a physician appears in a more or less favorable light may depend in large measure on whether he consistently conducts himself in consonance with good public relations practices and with a respectful ear attuned to public opinion.

in hematoma

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The *modern* procedure in any injury includes VARIDASE to accelerate natural healing. VARIDASE stimulates early fibrinolysis for rapid reduction of inflammation, swelling, and pain. Your patient will appreciate the comfort of recovery and faster return to normal activity.

***Precautions:** VARIDASE has no adverse effect on normal blood clotting. Care should be taken in patients on anticoagulants or with a deficient coagulation mechanism. When infection is present, VARIDASE Buccal Tablets should be given in conjunction with antibiotics.*

***Dosage:** One buccal tablet four times daily usually for five days. To facilitate absorption, patient should delay swallowing saliva.*

***Supplied:** Each tablet contains 10,000 Units Streptokinase, 2,500 Units Streptodornase. Boxes of 24 and 100 Tablets.*

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

What's the Doctor's Name?

He was known as the father of plastic surgery in Britain, starting his career as an army surgeon in France in World War I, then returning to England to organize a British plastic and jaw unit and to pioneer in this specialty. He operated on an estimated 10,000 servicemen until his death, at 78, on September 10, 1960.

He also operated on civilians injured in accidents, children born with abnormalities and women who wanted to improve their appearance. In World War II he trained many surgeons, among them Sir Archibald McIndoe.

He was born in Dunedin, New Zealand, on June 17, 1882, came to Britain in 1903 and attended Cambridge University. He continued his medical training at St. Bartholomew's Hospital. In the course of his career he devised the tube pedicle flap, the onlay eyelid graft and the palate push-back, as well as numerous other techniques.

Among his prominent patients were King Leopold of Belgium, who suffered facial injuries in an auto crash in 1935 in which Queen Astrid was killed, Daisy Kennedy, the Australian violinist, and Jack Gardner, British heavyweight whose eye was badly cut in a fight.

In 1924, when Danish sailors were injured in an explosion, he went to Denmark to treat them. Danes living in Britain 17 years later built a hospital pavilion in his honor for this good deed.

In 1930 he was knighted, and in 1957 he wrote, with Dr. Ralph Millard, *The Principles and Art of Plastic Surgery,* a 2-volume work noted for the easy charm of its writing as well as its profuse and authoritative illustrations.

He was an outstanding oarsman, cricketer and golfer in his youth and in the 30's, bedded with phlebitis, learned to paint. In 1959 he had a one-man exhibition in London of 132 of his works. Can you identify this doctor? *Answer on page 139.*

...the proof of the Patrician "200" is in the radiograph!

When you choose x-ray for private practice, look at performance as well as the price tag. "Economy" that is gained by short-cuts in table design or a reduction in power may mean slow exposures, blurred radiographs and repeated retakes. General Electric's Patrician "200" combination is designed with adequate power for private practice — a full 200 ma to stop anatomical movement sharply and clearly. Many other features found in larger installations are engineered into the Patrician: 81" table, independent tubestand, shutter limiting and automatic tube protection, to name just a few. And, considering its *uncompromising* G-E quality, this Patrician "package" is remarkably low priced.

Rent the Patrician through the G-E Maxiservice® plan that provides the complete installation, *including* maintenance, parts, tubes, insurance, local taxes — *everything* in one monthly fee. Get details from your G-E x-ray representative or mail coupon.

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Name_____

Address_____

Mediquiz Contest report on page 85

A **Resident Physician** MONTHLY FEATURE

Mediquiz®

These questions were prepared especially for RESIDENT PHYSICIAN *by the Professional Examination Service, a division of the American Public Health Association. Answers will be found on page 139.*

1. Most children afflicted with phenylpyruvic oligophrenia have:

A) Ichthyosis.
B) A dark complexion.
C) Impetigo.
D) A fair complexion.
E) Nevi.

2. In carcinoid heart disease serotonin is destroyed in the:

A) Kidneys.
B) Liver.
C) Reticulo-Endothelial system.
D) Spleen.
E) Lungs.

3. The most common primary neoplasm of bone originating in the sacrum is the:

A) Fibrosarcoma.
B) Benign giant cell tumor of bone.
C) Giant osteoid osteoma.
D) Osteochondroma.
E) Chordoma.

4. Anemic crises in chronic hemolytic disorders are most often due to:

A) Increased destruction of erythrocytes by the extrasplenic reticulo-endothelial system.
B) Occult bleeding.
C) Increased splenic destruction of erythrocytes.
D) An exhaustion of marrow elements.
E) A circulating hemolysin.

5. Clubbing of the fingers does *not* occur in:

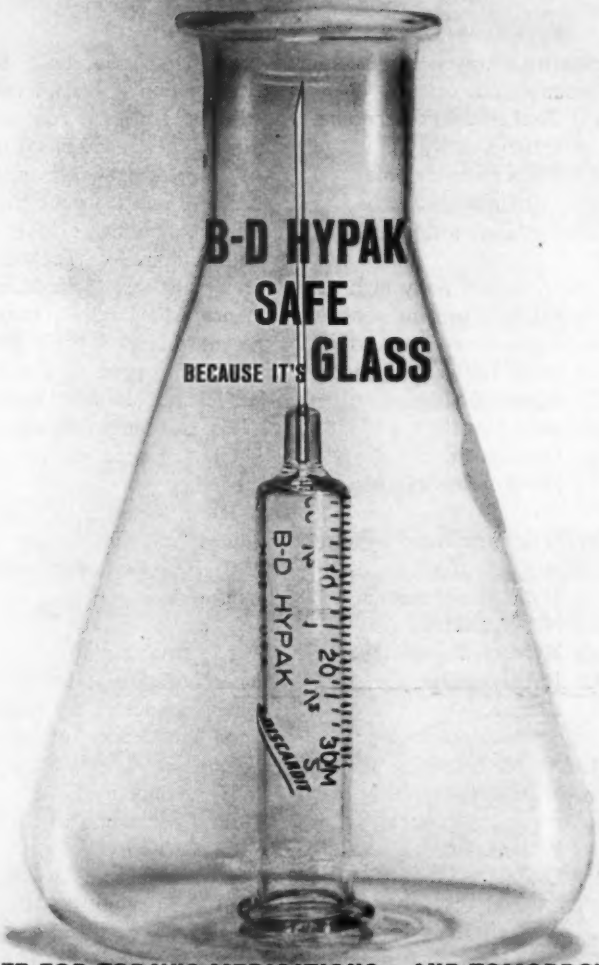
A) Biliary cirrhosis.
B) Chronic amebic dysentery.
C) Carcinoma of the cecum.
D) Oat cell carcinoma.
E) Ulcerative colitis.

6. Splenomegaly is an expected accompaniment of jaundice in all of the following conditions *except:*
A) Hanot's cirrhosis.
B) Weil's disease.
C) Postnecrotic cirrhosis.
D) Luetic hepatitis.
E) Infectious mononucleosis

7. Other factors being equal, axonal regeneration of a severed peripheral nerve in the extremities proceeds most rapidly in the:
A) Hand and foot.
B) Regions about the elbow and knee.
C) Forearm and lower leg.
D) Upper parts of the arm and thigh.
E) Fingers and toes

8. A streptococcus viridans endocarditis in an edentulous patient is:
A) An occurrence of more than normal frequency.
B) Suggestive of a salivary gland abscess.
C) An unusual occurrence.
D) An occurrence of normal frequency.
E) Known to run a rapidly fatal course.

9. A pressor response ten min-



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utes after intravenous histamine is probably due to:

A) Zuckerkandl's adenoma.
B) Gastric activity.
C) Pheochromocytoma.
D) Histamine headache.
E) Cushing's syndrome.

10. An abnormally high cerebrospinal fluid protein occurs in:

A) Rheumatoid spondylitis.
B) Peutz-Jaeger syndrome.
C) Ellison-Zollinger syndrome.
D) Ochronosis.
E) Primary amyloidosis.

11. The nephrotic syndrome includes:

A) Hyperphosphatemia.
B) Hypercalcemia.
C) Hypercholesterolemia.
D) Hyperkalemia.
E) Uremia.

12. Of the following, the most frequent site of rupture of an intervertebral disc is:

A) L3 and L4.
B) L4 and L5
C) C4 and C5.
D) C5 and C6.
E) C6 and C7.

13. A 24-year-old Negro male is brought to the emergency room complaining of retrosternal chest pain, palpitation, and vomiting of four hours' duration. Physical examination reveals a temperature of 101° F., respiration of 18/minute, and a blood pressure of 280/150 mm. The extremities are cold and pale, the pupils are dilated, and the skin is soaked with perspiration. The urine gives an orange test for reducing substance. The condition responsible for the illness is most probably:

A) Aneurysm of the aorta at the level of the renal arteries.
B) Coronary thrombosis.
C) A tumor of the adrenal medulla.
D) Coarctation of the aorta, adult type.
E) Retroperitoneal neuroblastoma.

14. Pain radiating down the inner surface of the arm, and the disappearance of the radial pulse upon abduction of the arm, suggest:

A) Syringomyelia.
B) Coarctation of the aorta.
C) Cervical disc syndrome.
D) Scalenus anticus syndrome.
E) Poliomyelitis.

Answers on page 139

VIEWBOX DIAGNOSIS

(from page 23)

OTTO'S DISEASE
(PROTRUSIO ACETABULI)

Note protrusion of femoral heads into the pelvis beyond the original joint sites with bony condensation lining the rims of the indriven acetabula.

MEDIQUIZ ANSWERS

(from page 134)

1(D), 2(E), 3(E), 4(D), 5(C), 6(B), 7(D), 8(C), 9(D), 10(A), 11(C), 12(B), 13(C), 14(D).

WHAT'S THE DOCTOR'S NAME

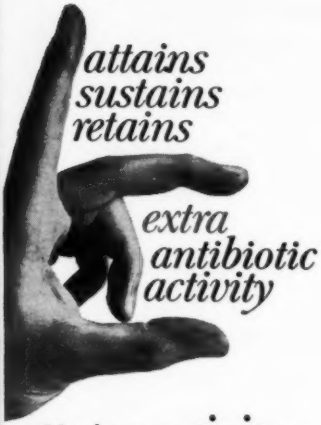
(Answer from page 132)

SIR HAROLD GILLIES

RESIDENT RELAXER

(puzzle on page 27)

H	E	R	P	E	S				L	E	T	H	A	L
E	N	E	R	G	I	D		C	A	T	H	O	D	E
M	U	R	I	A	T	E		L	I	N	A	C	R	E
A	L	U	M		E	N	T	E	R	A	L			
D	A	N	E	S		T	E	A	S		L	A	G	S
			R	A	P	I	E	R		E	I	G	O	N
C	C	I		C	E	N		S	E	Q	U	E	L	A
L	U	N	A	R	E				S	U	M	M	E	R
E	N	D	B	U	L	B		I	C	A		T	M	E
R	E	A	R	M		R	E	M	E	L	D			
K	O	N	A		T	E	A	M		S	E	S	T	B
			S	T	R	A	T	U	M		T	O	U	R
O	B	V	I	O	U	S		R	O	S	E	O	L	A
C	O	R	O	N	E	T		E	L	A	S	T	I	C
T	A	N	N	E	R				E	C	T	Y	P	E



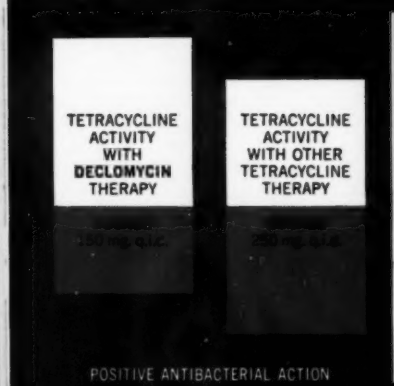
DEC

attains activity levels promptly

DECLOMYCIN Demethylchlortetracycline attains—usually within two hours—blood levels more than adequate to suppress susceptible pathogens—on daily dosages substantially lower than those required to elicit antibiotic activity of comparable intensity with other tetracyclines. The average, effective, adult daily dose of other tetracyclines is 1 Gm. With DECLOMYCIN, it is only 600 mg.

sustains activity levels evenly

DECLOMYCIN Demethylchlortetracycline sustains, through the entire therapeutic course, the high activity levels needed to control the primary infection and to check secondary infection at the original—or at another—site. This combined action is usually sustained without the pronounced hour-to-hour, dose-to-dose, peak-and-valley fluctuations which characterize other tetracyclines.



POSITIVE ANTIBACTERIAL ACTION

PROTECTION AGAINST PROBLEM PATHOGENS